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UNIVERSITY OF ALBERTA

LEARNING INFORMALLY TO BE A TEAM PLAYER

BY

FRED MACMAHON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN

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Date: October 5, 1992

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **LEARNING INFORMALLY TO BE A TEAM PLAYER** submitted by FRED MACMAHON in partial fulfilment of the requirements for the degree of MASTER OF EDUCATION in ADULT AND HIGHER EDUCATION.

Dr. D. Collett

Sue M. Scott

Dr. S. Scott

Dr. P. Larson

Date: Oct 5/92

ABSTRACT

One of the skills identified as being important in meeting the challenge of the changing workplace is the ability to work as a part of a team, to be a team player. But we know little, however, about what informal learning opportunities exist in the workplace, how learning occurs and how to facilitate this process. The purpose of this study was to develop an understanding how employees learn to be team players informally in the workplace, their perspectives on learning informally in the workplace and the factors which promote or impede this learning.

This is an exploratory field study which used qualitative research methods. Using Dow Chemical Canada Inc. as a research site, data was obtained from six employees selected from the Fort Saskatchewan plant. Although in-depth interviews were the primary data gathering technique, other methods were used. The analysis required repeated readings of transcripts and listening to tapes. The responses were noted, grouped and regrouped to ascertain major themes.

Three themes emerged that were fundamental to these participants informally learning to be team players: learning from and through experience; individual characteristics that enhanced informal learning; and the organizational context. These themes, though presented in this fashion, are not independent of each other, but interrelated, and played different roles and varied in impact in how the participants learned informally to be team players.

The participants underwent experiences that shaped and changed their perception, not only as a team player but of themselves. The participants used these experiences as a source to draw upon in developing and experimenting with new ideas which lead to new ways of doing.

Finally, several implications for management, adult educators and future research were proposed.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

> There is a high ground overlooking a swamp. On the high ground, management problems lend themselves to solutions through the application of research-based theory and technique. In the swampy lowland, messy, confusing problems defy technical solution. The irony of this situation is that the problems of the high ground tend to be relatively unimportant to individuals or society at large, however great their technical interest may be, while in the swamp lie the problems of greatest concern. (Schon, 1987, p. 3)

The workplace, in the past thirty years, has undergone an unprecedented change, brought largely by technological advances and the shift to a global economy. This change, moving us from a manufacturing economy to a service-oriented, technologically-based economy, is forcing organizations to look at the culture, philosophy and underlying values of the workplace (Schuler, 1989; Walker, 1988; Galagan, 1987). In fact, the survival of Canadian companies means focusing on the entire organization, that is, "it demands a transformation in the way the organization is run" (Farquhar et al., 1990, p. vii).

Transformation requires employee commitment and involvement in the decision making and operation of the company (Shelly et al., 1990). "This radical re-thinking of the need to have involved and committed employees represents a change in management philosophy....", a philosophy which is based on a management infrastructure that supports a team approach, concern for quality, shared responsibility for decisions (Farquhar et al., 1990, p. 35) and continuous learning (Marsick, 1992).

This transition in management philosophy is creating a new awareness, by management, of workplace learning. Carnevale (1989) indicates that "learning systems in the workplace are the first line of defense against economic and technical changes" (p. 30). North American organizational leaders are looking towards these learning systems to foster, in their employees, skills such as creativity, intuition, independent thinking, knowing how to learn, problem solving and team building capabilities (Carnevale, 1989; Walker, 1988). But in the past, the emphasis has not been on these types of skills. Training, based on the behaviorism paradigm, has focused on performance, where problem solving emphasizes the best objective solution through a linear, rational step-by-step process derived from the natural science. However, as the structure of organizations change due to decentralization, participatory management, flattening of middle management, multidisciplinary teams and a developing culture of empowerment, employees must learn to cope and adapt to their new environment under conditions of uncertainty, turbulence and rapid change. Hence, formal training may not be the only way to promote learning, since the learning problems in this environment are embedded in complex personal, social and organizational habits that cannot be resolved primarily by pre-conceived technical solutions (Austin et al., 1988; Marsick, 1987). Though formal training does play an important role in employee learning, Marsick (1988) states, "training frequently emphasizes job-related knowledge and skills as if it is possible to divorce them from the rest of the worker's life" (p. 191). Hence, traditional training "does not foster the reflective abilities needed to assist people at all levels to learn in the workplace, particularly in their informal interactions" (p. 187).

Where traditional training has concentrated on work-related development, informal learning enhances both work-related and personal development (Akin, 1987). In the swamp, as represented in Schon's metaphor, lies the whole realm of informal learning. Informal learning takes place every day. Employees encounter non-routine situations which force them (or may not) to reevaluate previous ways of responding. But what makes one individual learn from an experience and the other not? Marsick (1990) believes that the ability to reflect on one's actions is key to informal learning. Jack Mezirow (1981, 1990), Donald Schon (1983), and Chris Argyris

(1990) and others strongly believe that reflection, and more so, critical reflection, will enhance one's own ability for personal development in this type of environment. Mezirow (1990) states, "Reflection enables us to correct distortions in our beliefs and errors in problem solving" (1990, p. 1).

The heart of informal learning is learning through experience. People can learn almost every day through interaction with others in the workplace. They seek help at the time when their need to learn is the greatest. Dewey (1938) wrote, "all genuine education comes from experience" (p. 25) and Kolb (1984) states more recently, that learning is, "the process whereby knowledge is created through the transformation of experience" (p. 38). Marsick (1987) defines learning as, "the way in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of information, skills and feelings. It is also primary to the way which people construct meaning in their personal and shared organizational lives" (p.4). But the "experience itself is only a potential basis of learning" (Jarvis, 1987, p. 165). Though people can learn from interacting with others, they do not always do so. The individual may rely on presuppositions, thus discounting the event as a learning experience or simply reject the option to learn. According to Marsick (1990), Mezirow (1990) and Argyris (1990), learning takes place through an ongoing, dialectical process of action and reflection. The process of reflection enables people to become aware of many tacit, hidden, taken-for-granted assumptions in a situation where normal procedures and responses fail.

So what does simple and critical reflection mean in the context of the workplace? When we are critically reflective within an organization, we pay attention to, and inquire into the organization's culture -- "the way things are done". Marsick (1987) comments on a critically reflective learner within an organization:

> Critically reflective learners will not automatically follow an 'expert's' recipe for solving what has been defined for them as a problem. They will determine whether or not they see the problem and proposed solution in the same way, probe the organizational context to ferret out facets of the culture that influence action, and attempt to understand how suggested solutions fit with their own image of themselves (p. 18).

Without critical reflection, employees may be blindly socialized into the organizational culture, a process of "acculturation". But from the point of view of the organization, the company must assimilate a large number of people with different "meaning perspectives" into one homogeneous group to accomplish its goals. Thus, in this context, employees may perceive norms to be undiscussable and not question the ways things are done (Marsick, 1990). Habermas refers to this as non-reflective learning, learning that, "takes place in action contexts in which implicitly raised theoretical and practical validity claims are naively taken for granted and accepted or rejected without discursive consideration" (1976, p. 16). Being non-reflective, in an organizational context may, "lead to practices that may be unnecessary, at times harmful, and devoid of personal or organizational learning" (Marsick, 1990, p.29-30).

Informal learning, when compared to the time spent by employees in formal training, shows the importance of why adult educators need to understand and facilitate this process. Based on annual estimates by Carnevale (1984), 83% of the time and money spent on learning within organizations is informal. According to research by the Honeywell Corporation (Zemke, 1985), 80% of all workplace learning occurs outside formal structures; McCall, Lombardo and Morrison (1988) suggest that a manager spends only a small portion of their time in the classroom. Furthermore, informal learning does not depend on the institution and will take place despite the efforts by an organization to discourage learning.

Informal learning modes are thus the primary means for facilitating workplace learning in times of rapid change and uncertainty. We know little, however, about what informal learning opportunities exist in the workplace or how learning occurs.

The Problem

One of the skills identified as important in meeting the challenge of the changing workplace is the ability to work as a part of a team (Stephans, 1988). The Canadian Conference Board of Canada report, "Total Quality Management: A Competitive Imperative," states that "companies have realized that competitive complexities means that no single person can do all the work there is to do." So "teamwork should be a corporate strategic goal and all parts of the organization's system must work in concert to achieve it" (Farquhar et al., 1990, p. 42). Jacobs and Everett (1988) also propose that team behavior is essential to successfully tackle the high level of uncertainty experienced by workers faced with newly emerging technology.

While education and training departments have developed numerous team building programs to address the changing human resource development needs, they have focused primarily on formal learning strategies. Since, there is little information available to create environments that promote informal learning opportunities and develop programs that maximize potential learning, only a portion of the identified skills development needs have been addressed.

Problem Statement

How do individuals learn informally to be team players in the workplace?

Research Questions

What are employees' perspectives concerning the nature of learning informally in the workplace?

What strategies do individuals utilize to learn informally to be a team player in the workplace?

What factors promote or impede learning to be a team player through informal strategies?

Definition of Terms

The following definitions are meant to serve this study only. They are not intended to have general application beyond the scope of this study.

Informal Learning

Informal learning, for the purpose of this study, is defined as learning outside formally structured, institutionally sponsored, classroom-based activities. Control of learning rests primarily in the hands of the learner. This form of learning often takes place in unexpected or non-routine conditions (Marsick, 1990).

Perspective

Perspective is defined as the meaning and understanding we attach to experience which is influenced by our beliefs and frames of reference.

Empowerment

"From the point of view of learning, empowerment involves the opportunity to examine and test social norms on which expectations are based. Empowerment is thus an internal stance, but it is shaped by social forces" (Marsick and Watkins, 1990, p. 29).

Assumptions

Three major assumptions served to guide this study of workplace learning. The first assumption is that workplace learning should be studied from the learner's perspective, since learning results from an individualized interpretation of events and actions in the workplace. These events and actions form the basis for new learning that can lead to a change in thinking and acting.

The second assumption is that workplace learning occurs in a social context. Environmental circumstances influence the ways in which learning occurs. As Jarvis (1987) indicates, "all learning begins with experience which is itself socially constructed" (p. 84).

The third assumption is that thinking and action are linked. Thus, peoples' actions reflect their thoughts, at some level.

Significance of the Study

We know little about informal learning in the workplace and even less about what adult educators, organizations and individuals can do to facilitate such learning. Research based information on factors that promote learning in the workplace can be of considerable benefit to those involved in the practice of workplace education.

Marsick & Watkins (1990) state, "perceptions of learning and of the trainer's role, held both by trainers and the clients they serve, are particularly critical for informal...learning because perceptions currently held exclude much concern with informal...learning" (p. 247). The information provided from this study could help trainers and their clients understand the complex domain of informal workplace learning which could assist in the transformation of their current perceptions.

Moreover, the further existence of organizations depends upon them becoming "learning organizations" (Bennis and Nanus, 1985). Claxton and Murrell (1987) predict that "organizations will increasingly embrace learning as the central issue and act in ways that facilitate it" (p. 65). In order to meet these learning needs, the workplace must fill the gap between formal training and workplace demands by increasing the focus on helping others learn how to learn. With a greater understanding of how employees learn informally in the workplace and what facilitates it, organizers of adult education programs can draw relevant information for planning and facilitating programs that further the advancement of this direction.

In an economy where organizations are turning to participative management styles, such as "Total Quality Management", hoping to sustain their growth and possibly, their very survival, it is vital to understand how adults learn informally to work as a member of a team. Since teamwork is being looked upon as one of the key methods to elicit employee involvement within the organization, the findings from this study may assist adult educators to address what factors and environmental conditions would be necessary to promote informal learning opportunities for team building skills.

Limitations of the Study

The major limitations of this study were the following:

1. Only one researcher conducted the study. He viewed the data through his own perceptual lens which may influence data collection, analysis and interpretation. However, peer review was used throughout the study in an attempt to counter-balance this possibility. The researcher had the opportunity to regularly share individually collected data and the tentative analysis with peers, outside the study. In doing so, they served as neutral, objective reviewers of the data, e.g. themes, categories and units of analysis

identified by the researcher. Periodic adjustments or modifications to the process and the conclusions were affected by the feedback from these individuals.

2. The interview was the primary method used to collect data for this study. Hence, the study was limited by the participants' abilities to recall and articulate their perceptions, feelings, experiences and their ability to reflect on these experiences.

Organization of the Thesis

Chapter II, the literature review, frames the inquiry process, and provides opportunies to explore and integrate existing research findings. Following the literature review, Chapter III discusses the research methodology and processes and Chapter IV, the research findings. The final chapter of this thesis, Chapter V, presents the summary, discussion and implications of this study.

CHAPTER II

LITERATURE REVIEW

Overview

This chapter presents a selected review of the literature. The researcher reviewed books, journal articles, research reports, manuscripts and dissertations which were considered relevant to this study. This material was located through the use of computer searches from databases such as ERIC, ABI-Inform, and Dissertation Abstracts. Through gaining an understanding of the research previously conducted in this area, the researcher was able to generate a broad framework for the inquiry and assess the limits to the study. The review covers three areas: teams, informal learning in the workplace and learning organizations.

The first area, teams, provides an overview of the need for teamwork and team players in organizations and the importance of informal learning in the process of becoming a team player. Furthermore, this section indicates the lack of literature addressing how learning to be a team player might occur through informal strategies in the work place.

The second area, informal learning, provides the overview and conceptual foundation for understanding informal learning. The section focuses on experiential learning, the role of reflection and creativity, and informal strategies (mentoring, coaching and networking) employed in the workplace.

The third area, learning organizations, provides an overview of the meaning of a learning organization and focuses on the main characteristics of such an organization. Furthermore, this section highlights the difference between learning organizations and organizational learning.

Teams

Rapid technological change, the growing global marketplace, the aging of the work force, increased workplace diversity, changing educational levels, changing values, employee expectations, and a new sense of loyalties have pushed organizations in North America to experiment with team approaches to achieving cost-effective, quality products and services (Redwood, 1990; Parker, 1990). Old models of how to manage productivity growth and change no longer seem to be working. Hence, companies are flattening out the organizational pyramid, a transition from a formal, hierarchial structure to one using matrix management, networking, multidisciplinary teams, self management and temporary work relations as well as a corporate philosophy emphasizing innovation, creativity, quality and teamwork (Farquhar et al., 1990; Walker, 1988).

In the past, teamwork was "nice" but not critical for the success of the corporation. But as organizations become more complex, in terms of products, locations, technologies, business functions, and customers/markets, no one person can know it all (Parker, 1990). Leymann and Kornbluh (1989) expand on this change:

> As we enter the post-industrial economy we increasingly face the problem of helping people learn new roles rather than simply learn new skills. Companies competing in a global market increasingly emphasize the values of team work...(p. 186).

Today, teamwork and team players are critical for success, but little is known about team players and how they learn to be team players (Parker, 1990; Senge, 1990; Leymann and Kornbluh, 1989). Parker (1990) states, "Although much is made of the importance of being a team player in business, we know little about it" (p. xiv). He explains this lack of understanding:

> Much of what has been written about teams has focused on the internal dynamics of effective teams. Dyer (1987), Liket (1961), and McGregor (1960), however, were helpful in increasing our understanding of the team as an entity. For the most part, they emphasized team process. More recently, a great deal of attention has been given to leadership.

> Bennis and Nanus (1985), Kouzes and Posner (1987), and Block (1987) have presented important and often inspirational pictures of corporate managers as leaders. Now our understanding of team process and leadership needs to be joined and expanded to include the concept of team player (p. xiv).

There is also a great deal of information on formal strategies utilized to build effective teams in corporate environments (Reddy & Jamison, 1988; Mink, Mink & Owen, 1987; Adair, 1986; Goodman, 1986; Ends & Page, 1977). However, Carevale (1988) indicates that this skill is not learned solely in a formal classroom setting. According to Parker (1990), it was Elton Mayo who uncovered the power of the informal system in promoting effective teams and that "the informal system that Mayo identified persists today as an organizational issue under the rubic of 'culture'" (p. 18). However, a significant gap in the literature exists regarding how learning to be a team player might occur through informal strategies in the workplace and how organizations can create a culture that supports teamwork and team players.

Informal Learning

Because corporate education is closely linked to workplace changes, new paradigms for corporate structure and operations are influencing the way education is provided. Historically, much of the education conducted in the workplace environment, due to the strong influence of Taylor (1947), has been based on the philosophical and psychological tenets of behaviorism which emphasizes the teaching of predefined knowledge and skills (Goldstein, 1980; Marsick, 1987). Today, corporate education is experiencing a surge of interest, primarily due to the upheaval caused by the shift from an industrial economy to an information-based economy (Naisbitt, 1982). Numerous authors are suggesting changes in the philosophy and delivery of workplace education; Marsick (1987) encourages emphasis on informal learning in the workplace. She defines workplace learning:

> ...as the way in which individuals or groups acquire, interpret, reorganize, change, and assimilate a related cluster of information, skills, and feelings through daily interaction and experience within the organization whether or not it has been structured by trainers (p.4)

She notes that informal learning historically has been a major way employees learn job skills as well as "to better understand and relate to themselves, their colleagues, and the organization" (p.4).

Leymann and Kornbluh (1989) state that trainers have not helped employees to learn their role in order to work effectively in a post-industrial economy, since trainers have focused on skills rather than situations, ignored roles and relationships, and have separated the training encounter from the natural world (p. 189). Hence, they believe the major way employees have learned their jobs is through informal learning. The authors refer to this process as 'non-formal education' and stress the importance of learning though experience and group involvement (p. 258).

> A large part of this knowledge, this 'insight' into certain facts, is by no means the result of planned pedagogical efforts on the part of the employers or society....On the contrary it is the result of experience, gained by people who find themselves in certain life situations...." (p. 202).

Though little research has been conducted on informal learning, Marsick (1990), in developing a theoretical framework, indicates the core feature to informal learning is learning from and through experience. Moreover, it is: governed by non-routine conditions and is concerned with tacit dimensions of knowledge that must be made explicit. Kolb (1984) has written extensively on experiential learning and defines it as "the process whereby knowledge is created through the transformation of experience" (p. 2). But Marsick (1990) remarks, "learning takes place through an ongoing, dialectical process of action and reflection" (p. 8) and believes that Kolb understates the importance of this process. Building on Kolb's work, Jarvis

(1987 a) identifies nine responses to a potential learning situation, categorizing them as non-learning responses, non-reflective learning responses and reflective learning responses (p. 28). He defines learning as "the process of transforming experience into knowledge skills and attitudes (p. 16). Cell (1984) has also developed a theory of experiential learning, though he believes the value lies not with the content of what is learned from the experience but rather what is learned about the process of learning. He contends that it is transferrable to other areas of life such as intimate relationships and the workplace. Kolb (1984), Jarvis (1987a; 1987b) and Cell (1984) have all identified reflection as one of the keys to learning from experience and moreover, "the capacity to reflect on one's actions appears to be central to informal learning" (Marsick, 1987, p. 22).

Furthermore, informal learning depends on the context and more importantly, "when the nature of the task is interpersonal or social in nature" (Marsick, 1990, p. 16). Jarvis (1987 a) suggests that social interaction influences learning. In his schema there are learning situations, not types of learning or types of education.

Reflection in Informal Learning

In the workplace, the degree of reflection in learning will vary, but all informal learning requires some level of reflection. This may be only the regular examination of one's experience to assess its effectiveness -- simple reflection (Marsick, 1987) or, in comparison, to challenge norms and examine assumptions that lay behind one's reasoning and actions -- critical reflection (Mezirow, 1990). Action scientists refer to the difference between simple reflection and critical reflection in the concepts of single or double-loop learning. Building on the concept provided by Ashby (1952), Argyris and Schon (1974) state that single loop learning is the detection and correction of mismatches, without a change in the underlining governing policies or values, where double loop learning does require re-examination and change of the governing values.

Schon (1983) is critical of organizational learning systems which stifle reflective thought, referring to them as "diseases that prevent their own cure" (p. 266). He emphasizes the importance of problem setting, which is an interactive process of naming the focus of our attention and framing the context in which a problem is understood. This "reflection-in-action", helps to explain how people can learn from their experiences on-the-job. The practitioner (employee) draws on his or her experience to understand the situation, frames the problem, suggests action and then re-interprets the situation in light of the consequences of action (p. 128-133).

Mezirow (1981, 1985) has developed a theory of learning based on the critical social science of Habermas. His theory is based on three domains of learning: instrumental, dialogic, and critical self-reflective. Instrumental learning refers to task-oriented problem solving; dialogic learning to the way in which people come to understand consensual norms; and critical self-reflective learning to the way in which we learn to understand ourselves. In respect to the workplace, instrumental learning can be related to technical training and fits with the behaviorist construct for task-oriented learning. It is a process, "to control and manipulate the environment or other people" so, "we can measure changes resulting from our learning to solve problems in terms of productivity, performance or behavior" (Mezirow, 1990, p. 8).

The second domain, dialogic learning, is directed at interpreting consensual norms and not in learning "how to do things" (p.8). Mezirow (1990) states "communicative (dialogic) learning is less a matter of testing hypotheses than of searching, often intuitively, for themes and metaphors by which to fit the unfamiliar into a meaning perspective, so that an interpretation in context becomes possible" (p. 9). It is built on social interaction and requires dialogue to arrive at consensus, which means, "the learner attempts to understand what is meant by the other" (p. 5). In the context of an organization, employees are faced with the process of understanding oneself by interpreting polices, procedures and other employees actions within the context of the organizations culture--a process of informal learning (Marsick, 1987, p. 16).

The last domain, critical self-reflective learning, is itself not a true learning domain but a process (Mezirow, 1989, p. 175). Critical reflection can be applied to either of the two other domains, though not commonly applied to instrumental learning. Mezirow (1990) refers to critical reflection as "challenging the validity of presuppositions in prior learning" (p. 12). This process often leads to the transformation in "meaning perspectives", and ultimately, personal change (perspective transformation). Mezirow believes that "by far the most significant learning experiences in adulthood involve critical self-reflection -- reassessing the way we have posed problems and reassessing our own orientation to perceiving, knowing, believing, feeling and acting" (p. 13). One author who has examined the role of critical reflectivity at the workplace is Marsick (1987). In confirming the value of critical reflectivity, she indicates that critical reflection is one of the key factors for successful informal learning (1990, p. 219). She claims informal learning is facilitated at the worksite by helping learners to "continually probe their experiences to determine why they are or are not effective and how they can learn to do so" (1987, p. 24).

Using reflection to enhance learning, also plays an integral role in Argyris (1990) and Schon's (1978, 1982) work. They believe that in the workplace no one ever sets out to deliberately create errors, but despite their best efforts errors do occur. Argyris and Schon indicate that a gap often exists between the formulation of a plan and it's implementation in which the employee is unaware of or unable to resolve. They describe this gap as the difference between our espoused theories (the set of beliefs and values people hold about how to manage their lives) and our theories-in-use (the actual rules they use to manage their beliefs). Argyris (1990) refers to this gap as "skilled incompetence". He states "whenever errors are due to skilled unawareness and incompetence, we must keep in mind that the errors [the difference between our espoused theories and theories-in-use] are designed although we may not be conscious of the design" (p. 22). One reason that these errors are not detected is that the governing variables of our actions are often taken-for-granted, since one does not look deep enough to examine the assumptions, values and beliefs underlying these actions. Within the workplace, Marsick (1988) indicates that if a person continues to take a non-reflective approach (single loop learning) to non-routine circumstances, it will only lead to continued failure:

> Because his or her solutions are based in a set of undiscussable governing values that frustrate success, such as remaining in control and avoiding what are perceived as negative feelings. These values are tied to the culture of the organization and are counterproductive in part because they prevent critical inquiry into the reasons of failure (p. 193).

To break this cycle, Argyris (1990) believes that the individual has to get by single loop learning into double loop learning. That is to dig below taken-for-granted beliefs and assumptions so that one can reframe the situation, to become critically reflective.

Though there are differences between Mezirow theories and the combined works of Argyris and Schon, they share the central thought that critical reflection is the key requirement for informal learning. Specifically, critical reflection enables people to challenge norms and examine assumptions that lay behind their reasoning and actions, and to question the collective assumptions of the organization.

Creativity

Marsick (1990) believes that creativity is an important condition for informal learning since "it enables people to think beyond the point of view they normally hold" (p. 30), down the "unknown road". This ability to reframe a situation differently allowing for new concepts and ideas to be developed, bears a close relationship to the reflective learning process. D. H. Wells (1986) defines creativity as "the idea, concept, or tangible manifestation of the idea or concept **has not been perceived** as the solution to the problem **before** ...." and Srinivasan (1977) as "the full use of imagination, **going beyond the cold and rational analysis of facts**" (p. 56, emphasis added). Marsick (1990) refers to creativity as "the capacity of people to see a situation from many points of view, and to use new perspectives and insights to **break out of preconceived patterns** that inhibit learning" (p.8, emphasis added). What appears to be common in all these definitions is the ability to "break out of preconceived patterns" of thought which restricts the framing of the situation in a new perspective. Fernald (1987) believes the American worker has the potential to be creative, but is, "unable to overcome the blocks to creativity caused by their perception of themselves, others and the workplace environment" (p. 315). Therefore, to be creative, one must change their perception of the problem through "awareness" (Richards & Brown, 1982).

The process of "awareness" is an important concept in the creativity literature. Rockenstein (1988) has developed a "Taxonomy of Educational Objectives of the Intuitive Domain" as it relates to creative thinking and problem solving. His first step, out of four, is developing "awareness", or in other words, reflecting on past experiences. Fernald (1987) refers to this process as the "frustration" stage. He states that "the 'frustration' stage has been universally defined as a mental or emotional block caused by the individual's perception of the situation" (p. 322). In order for the individual to overcome this stage the individual must understand more about himself, his values and his perceptions. Agor (1990) states that intuition (creativity) requires "challenging traditional assumptions" in non-routine situations. In order to break out of preconceived patterns, one must be "aware." Thus "awareness" bears a strong relationship to the early stages of reflective learning (Marsick 1990).

Schon (1983), also recognizes the importance between reflection and creativity in the process he refers to as 'reflective conversation with the situation'. In this conversation, people creatively connect ideas that might otherwise be considered quite dissimilar, in what he calls "seeing-as" (p. 182). As Schon explains, "seeing-as" has its own life cycle:

> In the early stages of the life cycle, one notices or feels that A and B are similar, without being able to say similar with respect to what. Later on, reflecting on what one perceives, one may come to be able to describe relations of elements present in a restructured perception of both A and B which account for the preanalytic detection of similarity between A and B. Later still one may construct a general model for which a redescribed A and a redescribed B can be identified as instances. The new model is a **product of reflection** on the perceived similarity {emphasis added} (p. 186).

Informal Learning Strategies

Learning through relationships with other people is considered a significant informal strategy. Mentoring, coaching, and networking are workplace relationships that facilitate informal learning (Marsick, 1987a). In this section, these three workplace relationships are reviewed.

Mentoring

In the last decade, interest in the topic of mentoring has surged (Daloz, 1986), though the concept has been around for centuries. In fact, in Homer's

Odyssey, Mentor was the tutor to whom Odysseus entrusted his son, Telemachus (Bova, 1987). A mentor "serve[s] as a protector or parent figure for an individual" (Bova, 1987, p. 122) and functions as a "trusted counsellor or guide" (Cook and Bonnet, 1981, p. 1). Daloz (1986) also describes mentors as "guides". He states, "They lead us along the journey of our lives. We trust them because they have been there before" (p. 17). The Woodlands Group (1980) defines a mentor as "a host and guide welcoming the initiate into a new occupational and social world and acquainting the protege with its values, customs, resources, and cast of characters" (p. 920).

Levinson (1978) states that "the mentor relationship is one of the most developmentally important relationships a person can have in early adulthood" (p. 334). In relation to work, Daloz (1986) points out "mentors are especially important at the beginning of people's careers or at crucial turning points in their professional lives" (p. 20). Mentors can assume a variety of educational roles, such as supportive peer (Kram, 1985), supportive bosses, organization sponsors, professional career mentors, patrons, and invisible godparents (Bova, 1987).

Because of the success of this informal learning strategy, organizations have structured employee development programs around mentoring. Kram (1985) suggests that the mentoring relationship should remain informal:

> those that are matched may resent the formalized relationship...and

> those not matched may feel deprived and without adequate skill training and a reward system and performance management systems that support mentoring behaviors. Participants are likely to become frustrated even if they initially are enthusiastic and committed to the program (p. 256).

Zemke (1985), summarizing the Honeywell Corporation's research, reports that few managers claim to have had mentors. Instead, "being mentored" or having experienced "mentoring behaviors" was more what actually happened within the workplace. In contrast, McCall et al. (1988) research on how successful executives develop on the job found that mentoring was rare or nonexistent among the successful executives in their study (p. 12).

Coaching

"Coaching", a term taken from athletics (Schon, 1987; Stowell, 1988; Yakowicz, 1987), refers to a developmental relationship. Schon, uses coaching to describe a teaching relationship between a faculty member and a student. In his view, the artistry of the coach is in:

> creating and sustaining a process of collaborative inquiry...drawing upon an extensive repertoire of media, languages and methods of description in order to represent ideas that will "click" with each

> student...modelling a new way of seeing error and "failure" as opportunities for learning (1987, p. 299)

Through dialogue with the student, the coach communicates and engages in "reflection in action". Schon (1987) describes three models of coaching, joint experimentation, follow me, and hall of mirrors, each of which requires different sort of improvisation, orders of difficulty and contextual conditions (p. 295).

Kram suggests that coaching is a learning opportunity across workplace environments which offers:

> access to ideas and strategies that will result in a positive...work product...as well as specific strategies for accomplishing work objectives, for achieving recognition, and for achieving career aspirations (1985, p. 28).

Stowell (1988) and Yakowicz (1987) suggest coaching is a collaborative relationship that serves the organization in developing improved communications. Yakowicz (1987) also identifies a number of significant benefits associated with collegial forms of coaching; expanded resources for learning on the job; access to alternative perspectives; and enhanced feelings of confidence and self-esteem (p. 153-154).

Networking

Networking, as an informal learning strategy, is a communication process established and facilitated through relationships. Networks are "constellations of relationships" (Kram, 1985, p. 154) and a "system of people connections" (Bard and Loflin, 1987, p. 66). Naisbitt (1984) describes networks as "people talking to each other, sharing ideas, resources and information" (p. 215). Tichy and Devanna (1986) suggest that networks need to be made up of individuals with different views, because they tend to reinforce existing ideas and "provide redundant views of the world" (p. 54).

Learning Organizations

According to Fortune Magazine, "the most successful corporation of the 1990's will be something called a learning organization, a consummately adaptive enterprise" (1989, p. 54). Pelder, Boydell, and Burgoyne (1988) defines the learning company as, "an organization which facilitates the learning of all of its members and continuously transforms itself in order to meet its strategic goals" (p. 92). They believe that the learning organization is one whose members are continuously deliberately learning. Furthermore, a learning organization must be capable of bringing about their own continuing transformation (Marsick and Watkins, 1992a). The capacity to transform, according to Schon in "Beyond the Stable State" characterizes this type of organization.

In learning organizations the emphasis is on the learning process (Senge, 1990; Pebler et al., 1988; Marsick & Watkins, 1992a), where as 'organizational learning' is an outcome measured by its results (Argris and Schon, 1978). Argris and Schon (1978) define organizational learning as that which occurs when "members of the organization act as learning agents for the organization, responding to changes in the internal and external environments of the organization by detecting and correcting errors in organizational theories-in-use, and embedding the results of their inquiry in private images and shared maps of organization" (p. 29). Learning has occurred, in this case, when the organization has developed better systems for error detection and correction.

The process in developing a learning organization is the act of creating a culture that supports continuous learning and development. "Unfortunately," according to Senge (1990a), "the primary institutions of our society are oriented predominantly toward controlling rather than learning, rewarding individuals for performing for others rather than for cultivating their natural curiosity and impulse to learn" (p. 7). An organization may delegate authority to a temporary sub-system such as a work team, but if the system as a whole remains unchanged, that is the organization as a whole remains highly controlling and centralized, no learning has resulted. Learning has only occurred when fundamental relationships between people in the organization are altered (Marsick & Watkins, 1992a).

Another model of the learning organization is that developed by Peter Senge, who defines a "learning organization [as] a group of people continually enhancing their capacity to create what they want to create" (Galagan, 1991, p, 42). He focuses more on generative learning, which is about creating rather than coping referred to as adaptive learning. This movement from adaptive learning to generative learning was illustrated in the total quality movement in Japan. He believes that the total quality movement was the first wave in building learning organizations (p. 8).

Senge (1990b) outlines five disciplines vital in developing a learning organization, system thinking being the cornerstone of the remaining four disciplines. System thinking is the ability to see things as wholes, which includes interrelationships and the processes. This provides a framework for the other four disciplines which are: developing personal mastery through clarifying and deepening our personal vision, understanding our mental models to distinguish data from assumptions and challenging hidden assumptions, building shared visions and understanding and developing the power of team learning.

Marsick and Watkins (1992a) provide another model and defines learning organization as:

> one in which learning is a continuous, strategically-used process--

> integrated with, and running parallel to, work--that yields changes in the way individuals, teams, and organizations think, act, and feel. Learning can be incremental, but the key to succuss is transformational learning in which people understand the organization and their work in fundamentally new ways.

In the development of their model, Marsick and Watkins incorporate social learning and field theory as developed by Kurt Lewin and transformational learning. They have adopted Fritz Heider's social learning theory that learning occurs when three conditions are met as the core of their framework: the learners CAN learn, to assess and increase the learning threshold; the learners WANTS to learn, to create and develop a support structure; and the learners will TRY to learn, to increase autonomy and empowerment. This model calls for a workplace that is democratic, more participatory and less authoritarian. Some of the more important strategies within this environment are employee empowerment, management by fact and teaching managers to be facilitators, coaches, interpreters and guides. In fact, most models stress the need for new roles for the leaders of organizations. Pedler et al. (1990) states that a learning company "is peopled by colleagues and companions rather than bosses, subordinates and workers" (p. 94). Senge (1990b) indicates, "In a learning organization, leaders are designers, stewards and teachers. They are responsible for building organizations where people continually expand their capabilities ... that is, they are responsible for learning" (p. 340).

Summary

The review of the literature on teams validated the importance and necessity of teamwork in today's economy, but revealed the lack of understanding how learning to be a team player might occur through informal learning.

Due to technological advances and the shift to a global economy, numerous authors are suggesting developing organizational cultures that support learning from experience which emphasizes informal learning in the workplace. According to Marsick and Watkins (1990), cultures that have supported learning from experience have drawn upon strategies that have been labelled as informal learning opportunities. Informal learning can occur in a variety of ways that include but are not limited to team work, on-the-job-experience, mentoring, coaching, and networking.

Reflection, critical reflection and creativity was discussed in relation to informal learning in the workplace. Though the concept of critical reflection is integral to creativity and both are essential to enhance informal learning, critical reflection is not easily fostered within this environment. By focusing on informal and incidental learning opportunities, a foundation is built to design a culture of continuous learning for continuous improvement in the workplace.

An organization which encourages a culture of continuous learning is referred to, in the literature, as a learning organization, an organization that emphasizes the process of learning and not the outcome. A learning organization is one in which learning and working are synonymous.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

This exploratory field study used qualitative research methods with elements of grounded theory to study how employees learn informally to be team players in the workplace. Within this chapter, the specifics of the research design and methodology of the study are described. First, the research design is outlined, followed by a description of the research site, the selection of the participants and an overview of the participants' demographics. The chapter continues with the specifics of the methodology, the results of the pilot study, and the description of the process of data collection and the data analysis. Data trustworthiness and the ethical considerations of the study conclude the discussion.

Research Design

The study was approached from the naturalistic paradigm. The natural setting, the workplace, is the source of data, "since context is so heavily implicated in meaning" (Lincoln & Guba, 1985, p. 187). Lincoln and Guba

(1985) state that "inquiry must be carried out in a 'natural setting' because phenomena of study [the employees]...take their meaning as much from their contexts as they do from themselves" (p. 189). According to Bogdan and Bicklin (1982), "'Meaning' is of essential concern to the qualitative approach" (p. 29). By gathering data in the natural setting, the researcher observes "how people act and think in their own settings (Bogdan and Bicklin, p. 43). The emphasis being contextual, inquiry demands a human instrument (Lincoln & Guba, 1985, p. 187). Qualitative methods, such as interviews, are emphasized within this study not because the naturalistic paradigm "is antiquantitive [sic] but because qualitative methods come more easily to the human-as-instrument" (Lincoln & Guba, 1985, p. 198).

Qualitative research in the past years has gained more attention, but along with this trend a great deal of ambiguity has developed in understanding the concepts and philosophy it implies. Kirk and Millar (1986) comment in this regard:

> Qualitative research is an empirical, socially located phenomenon, defined by its own history, not simply a residual grab-bag comprising all things that are "not quantitative." Its diverse expressions include analytic induction, content analysis, semiotics, hermeneutics, elite interviewing, the study of life histories, and certain

> archival, computer, and statistical manipulations....
>
> The accumulated wisdom of the academic tradition of qualitative research is largely a formal distillation of sophisticated techniques employed by all sorts of professionals--adventurers, detectives, journalists, spies--to find out things about people. Necessarily, the formal tradition has been accompanied by certain distinctive orientations. Qualitative research is socially concerned, cosmopolitan, and, above all, objective (p. 10).

A variation which fits with the naturalistic paradigm is grounded theory, "a constant comparative method of collecting and analyzing data aimed at generating rather than testing theory. Theory is grounded in the perceptions of those being studied and therefore, is considered more relevant for practice" (Marsick, 1987, p. 172). Grounded theory, significant to this study, "follows from the data rather than preceding them" (Lincoln and Guba, 1985, p. 204) thus, through an inductive process, theory emerges from diverse yet related pieces of evidence. What emerges from a grounded theory study "is the building of theory---theory that emerges from, or is 'grounded' in, the data" (Merriam and Simpson, 1984, p.99). Hence, grounded theory, which is "particularly suited to investigating problems for which little theory has been developed" (Merriam and Simpson, 1984, p. 99), suits this study because of the lack of research-based information of workplace learning.

In summary, qualitative research was chosen as an appropriate research methodology because of its suitability for the goals of the study and the nature of the problem under study. The major reasons of which are summarized in the following:

1. The study is exploratory, since the interest is with understanding the phenomena better.
2. The study was approached from the naturalistic paradigm, since the concern is with how the participants' perceive their world.
3. The study is built on the premise that reality is socially constructed so an approach which emphasizes the subjective aspects of people's behavior is consistent with that premise.
4. The grounded theory approach is appropriate, since no formal or complete theories regarding informal learning within the workplace exist.

Research Site

The site for the study was Dow Chemical Canada Inc., Fort Saskatchewan, Alberta. The company, world wide, manufactures and supplies more than 2,000 products and services. Employing over 62,000 people around the world, the company operates 181 manufacturing sites in 33 countries.

Dow's Fort Saskatchewan site is a bulk chemical manufacturer with the exception of a styrofoam plant and employ's approximately 1450 people of which about 400 are contracted full time.

The structure of this division is fairly traditional and hierarchial, and the reporting structure is based on a matrix management system. Over the past years management has reduced the number of operating levels to improve efficiency. Currently, the senior officer at the Fort Saskatchewan site is the Vice President and the divisional manager, who reports to the President of DOW Canada. Reporting to the divisional manager are nine managers. A manager may have the responsibility for three or four functions within the company or, one or more production plants. Each production plant is a business unit all to its own, operating independently and is controlled by a superintendent. Generally there are four reporting levels in a production plant from the superintendent down to the technician, but some plants have three levels.

After the recession in the early 80s, the company officials turned to Total Quality Management to enhance their competitiveness. Furthermore, management created a vision for the company, a vision of employee involvement and empowerment within the company. They quickly realized that adding or reducing the number of supervisors was not going to help reach their vision, and decided what they needed was to get employees working together, to foster a team atmosphere where they were involved in everyday decision making and responsible for their day to day processes. To enhance this change DOW has engaged in a macro process to assist each employee to identify their own customers and to identify how their efforts tie into the company's vision and succuss. This management improvement process is estimated to be about 70% complete.

Depending on organizational needs, a company's concept of a team environment varies, not only in purpose but in structure. Teams may be permanent or temporary, functional or cross-functional, synonymous with or auxiliary to the activities of the natural work group, conventionally supervised, or self-managed. Within DOW, temporary task teams, functional or cross-functional, are used to deal with specific organizational problems. Other team environments within Dow consist of natural work groups or teams which work within a conventional supervisory structure and are permanent and ongoing.

DOW uses a team sponsor to keep control over the direction of a task team. This sponsor is usually a senior person, for instance a superintendent or production manager. The sponsor looks at the mandate of the team to ensure that it fits in the overall vision of the company. They also help to remove barriers and provide the resources for the team to get results.

The Corporate Vision for this company reads "A premier global company... dedicated to growth...driven by quality performance and innovation...and committed to maximizing our customers' success..always living our Core Values" (Dow Canada 2000, p. 3). One of the five integral elements highlighted in Dow Canada 2000 for ensuring the long-term success of the strategy for achieving the Corporate Vision is their employees:

> Our employees are the source of Dow's success. We treat them with respect, promote teamwork, and encourage personal freedom and growth....We will foster an environment in which people look forward to change and are committed to improvement through a life-long pursuit of continuous personal development. We will emphasize respect for the individual (p. 3).

Dow Chemical continues to espouse commitment to employee learning and teamwork, "Balance teamwork and individual initiative" and to "Maintain functional excellence while fostering multi-functional teamwork" are two "critical success factors" outlined by the organization for achieving company targets (p.7). Also, the 1990 Annual Report states "teamwork is the foundation of many of Dow's most successful efforts" (p. 16).

Dow Chemical is one of many companies being forced to change and adapt to the global marketplace. In order to help facilitate this change, senior management is attempting to foster a team environment within the company. This evolution, moving from a traditional management structure to one of teamwork, makes this company a prime site for this research study.

Selection of Study Participants

The researcher contacted the Manager, Salaried Operations, Human Resource Department, Western Canada Division, Dow Canada regarding the study. The researcher outlined the purpose of the study and the criteria for participant selection. The criteria for this selection was the following: the participants must have had started with Dow at various levels; progressed fairly quickly relative to their peers; had a variety of job functions within Dow; demonstrated on the job learning and an interest in taking on new tasks and had been recognized by management for these efforts; and were active in team work and teams, as a leaders or members, and considered by management to be effective team players. Since the selection was based on informational considerations in order to maximize information, the Manager approached employees within the company that met the agreed upon criteria. According to Goetz and LeCompte's schema this process is considered a reputational-case selection method in purposive sampling. Thus, the participants were chosen "on the recommendation of experienced experts in an area" (Merriam, 1988, p. 50). After outlining the study to this select group and gaining their consent, the Manager forwarded their names and phone numbers to the researcher.

The Participants

Six employees from Dow Canada's Fort Saskatchewan plant were selected for this study. Out of the six participants there were three men and three women, three of whom were between 26 and 32 of age, two between 33 and 39, and one between 40 and 46. The average number of years that they had worked for DOW was ten years and the average number of years in their current position was two. All participants were currently active in team related work which consumed more than 65% of their work day. The average number of years the participants had been involved in team work was nine years.

Methodology

To gain an awareness and understanding of the thinking and research relevant to the research problem, a literature review was conducted. According to Merriam and Simpson (1984), a literature review:

> provides a theoretical foundation for building knowledge...helps conceptualize the study...and provides a collective point of reference for interpreting the researcher's own findings (p. 30-31).

Bogdan and Bicklen (1982), state that a literature review will help the researcher "to expand the work of others" (p. 153), thus, a selective and critical review, by the researcher, of earlier research, research designs and research instruments was done. This review, also, assisted the researcher in developing questions for the initial interview guide.

However, a limitation or potential danger of reading the literature while conducting the study, suggested by Bogdan and Bicklen (1982), is that the researcher "may find concepts, ideas, or models that are so compelling they blind you to other ways at looking at the data" (p. 153).

After the literature review was completed, a pilot study was performed to test the research instruments and improve the researcher's skills as an interviewer. Once the pilot was completed, and after the necessary changes were made to the research instruments, all participants were contacted by phone to arrange meeting times. The location of the meetings were arranged by a contact person within the Human Resource Department. All meetings were conducted at an HR interview room, during business hours, located on site where privacy was guaranteed and interruptions minimized.

The first meeting with the participants consisted of three different agenda items: signing the consent form; filling out the participant data inventory; and outlining of a critical incident.

Since each participant was involved on a volunteer basis, each participant was advised by the researcher as to the purpose of the study, the degree of commitment that would be required, the specific activities in which they would be involved and the ethical standards that would be practised by the researcher. These standards included confidentiality and disclosure practices of the study. Each individual was asked to sign a Subject Consent Form (see Appendix 1) which detailed this information.

Next, each participant was asked to fill out the participant data inventory (see Appendix 2). This inventory was designed to obtain demographic information prior to conducting the interviews in order to maximize the value of the time spent in interviewing. The information solicited included gender, age, work history, etc. The information, that emerged from the inventory, helped in familiarizing the researcher with the participants prior to the interview and assisted in the interview process.

Once the consent form and participant data inventory was completed, the participant was asked to recall a significant event that occurred at work where they learned something important about themselves, their job, or the organization (see Appendix 3). This significant event or critical incident was used as a research technique to provide self-generated, non-directive data in an efficient manner. This research method is an effective method since "people...are in a prime position for making recommendations" (Flanagan, 1954, p. 327). Flanagan defines "critical incident":

> By incident is meant any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must occur in a situation where the purpose or intent of the act seems fairly

> clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning the effects (1954, p. 327).

Zemke (1979) refers to the critical incident as a "thing of beauty...the researcher literally ends up with a box full of great information for making case studies" (p. 132). According to Fivers (1980), researchers Harlacher, Peabody, Connelly, Carter, and Kohl have made effective use of the critical incident technique in studies within the field of adult education.

The purpose of soliciting information from critical incidents was to provide the researcher with a complete learning scenario. Thus, it was possible to gain additional information about the participants' individual insights and perspectives on the concept of teaming and how they learned to be team players in the workplace. This information was used at the beginning of the research study "as a way of identifying themes and categories which might profitably be explored further through interview, observations and other methods" (Brookfield, 1987a, p. 3). Also, the use of the critical incident enhanced the interview since the participant and the researcher shared a specific event and, also, acted as a point of reference during the interview.

After completing the three agenda items, the first meeting was concluded. Following the first meeting, each participant underwent three interviews. Interviews were used to find out information that we cannot directly observe. Since the researcher cannot observe feelings, or how the participants' interpret the world around them, interviewing becomes the primary way the researcher can gather data about these phenomena (Merriam, 1988).

Merriam (1988) refers to three possible formats of collecting data through an interview; structured, semi-structured and unstructured. A semi-structured interview format was used in this study as a means for standardizing the questions so that they could analyze commonalities and differences among participants. According to Patton (1980):

> The interview guide provides topics or subject areas within which the interviewer is free to explore, probe, and ask questions that will elucidate and illuminate that particular subject. Thus, the interviewer remains free to build a conversation within a particular subject area, to word questions spontaneously, and to establish a conversational style- but with the focus on a particular subject that has been predetermined (p. 200).

In this study, information obtained from the literature review was utilized by the researcher to design a tentative semi-structured interview guide (see Appendix 4). This guide was also developed in conjunction with the purposes of the study and in response to the questions formed for the study. This tentative guide was put to a peer and committee review and evaluated for the appropriateness of the questions.

The length of interviews was from 1 to 1 1/2 hours. The researcher had projected that this time would lend itself to yielding rich, thick, descriptive data without undue imposition on the employee.

The main limitation of the interview technique, however, lies with the interviewer. Bogdan and Bicklen (1982) notes the interview is perhaps the most frequently used qualitative research method and also the one most subject to misuse. The role of the interviewer as the research tool, "entails not merely obtaining answers, but learning what questions to ask and how to ask them" (Taylor and Bogdan, 1984, p. 77). Merriam and Simpson (1984) caution that if interviewers are to gather valid and reliable data, they must have skill as well as knowledge of the technique. If the interviewer is unable to put the participant at ease and gain his or her confidence, the information gathered may be limited or biased. Additionally, according to Guba and Lincoln (1981):

> Weaknesses in interviewing include its inefficiency and cost...the materials are difficult or impossible to pretest...difficult if not impossible to standardize and...[is] highly vulnerable to interviewer bias (p. 187).

Hence, to ensure the quality of the data, the researcher entered each interview as a learning opportunity, therefore, allowing for a continued effort to enhance the reseacher's interviewing skills.

All interviews were audiotaped and field notes of general impressions of the interview process and specific impressions of patterns that might be emerging from the data was taken throughout the interviewing process. Immediately after each interview, time was spent reviewing notes, making clarifications, and listening to the tapes while the information was still "fresh" in the researcher's mind.

Pilot Study

A pilot study was conducted with two participants in order to test the critical incident instrument and interview guide derived from content grounded in the literature. Since the success of this study was heavily dependent on the interviews, the pilot study also provided the necessary practice in conducting an interview and insight into the type of information that might be obtained.

The pilot consisted of meeting with each pilot participant twice. The first meeting consisted of signing the consent form, filling out the participant data inventory and testing the critical incident instrument. The last meeting was to test the interview guide.

As the result of this pilot, it was found that the necessary revisions to the instruments would be minimal. The data for this pilot, however, did help to modify the interview guide's length, which was found to be too long and consumed too much time for one session. Hence, some interview questions were deleted and modifications were made to some questions to improve clarity. Also, and equally as important, the researcher realized the numerous complexities an interviewer is faced with in an interview. The researcher found that not only does one have to be an active listener but also, an acute observer. Though the researcher had only two pilot interview sessions, it was found to be highly effective and useful for the remaining interviews.

Since few changes were required to the instruments, it was decided by the researcher, that the pilot participants would become full participants within this study and to include the data that had been acquired through the pilot process. Both pilot participants agreed to remain active participants in the study.

Data Collection

Once the pilot was completed, four other employees were contacted. Similar to the first meeting in the pilot study, all participants underwent the process of signing the consent form, filling out the participant data inventory and the outlining of a critical incident. All participants agreed to participate. Before and after the first interview, brief telephone conversations were held with each participant. These conversations provided the researcher the opportunity to develop rapport and a climate of trust. During the interviews, the interviewer made few comments except to ask for clarification, elaboration, or give specific examples wherever necessary. If a respondent's answer was short, the interviewer probed further, seeking a deeper understanding of themes and concepts and moreover, to provide the respondents every opportunity to recall and describe matters related to the question. All questions were asked in the same sequence, except when interviewees addressed multiple questions spontaneously. Under these circumstances, the researcher reordered questions as appropriate or did not ask questions that had already been answered. Respondents also were encouraged to take whatever time was necessary to develop a complete answer. The interviews were relaxed and positive.

Prior to the second interview, the researcher had given the participants a transcript of their first interview allowing them the opportunity to reflect on what was previously discussed. At the start of the second interview, the researcher proceeded to inquire into their thoughts, perceptions and reflections on the preceding interviews. This also provided the researcher an opportunity to share with the participants' themes, categories and ideas that were starting to emerge. These discussions helped the researcher to clarify, articulate and reformulate, and even discard rudimentary ideas and concepts that had begun to form in the researcher's mind. Throughout the remainder of the interview the researcher attempted to probe further for their feelings and perceptions concerning their experiences which were discussed within the previous and at the beginning of the second interview. This additional probing varied in depth from participant to participant.

Once the second interviews were completed, the reseacher started to consolidated the emerging themes and categories. This resulted in a draft of emerging themes and categories which was used as a basis for discussion for the third interview. Along with this draft, additional questions and probes were prepared to explore ideas and concepts which seemed undeveloped. These third interviews, being progressively more relaxed than the previous interviews, consisted primarily of reviewing the draft of emerging themes and categories and addressing the remaining questions. The third interviews, were used primarily for member checking, and generated significantly less new data than the preceding interviews.

Throughout the interviews the participants responded differently depending on their own experiences. Some participants found it difficult at first to explore and reflect on their past experiences and feelings, but once completing the interview process expressed their enjoyment of the opportunity to reflect on their learning process. Others found new connections and meaning between events. Virtually all participants indicated that they found the process beneficial.

Analysis of the Data

Preliminary analysis started with the researcher transcribing the interviews that were audio-taped. Each transcription was assigned a number and each person a pseudonym. The researcher listened to each tape while reading the transcript to insure authentic reproduction. Since the analysis of the data was occurring along with the collection process, numerous readings and repeated listening to tapes were undertaken to identify the major themes and sub-themes. Data collection sessions were adjusted to pursue specific leads based on what was found in previous interviews. According to Merriam (1988), "A qualitative design is emergent: One does not know ... what to ask, or where to look next without analyzing data as they are collected" (p. 123). Also, during this process, further literature was reviewed. As Bogdan and Bicklen (1982) suggest, "We believe that after you have been in the field for a while, going through the substantive literature in the area you are studying will enhance analysis" (p. 153).

In the beginning stages of analysis, the researcher read the data and jotted down notes, comments, observations and queries in the margins. Once completed the researcher proceeded in identifying "units of information that will, sooner or later, serve as the basis for defining categories" (Lincoln & Guba, 1985, p. 344). Units of data consisted of a phrase or, one or more sentences taken from the data source, the interview transcripts, critical incident responses, and/or field notes. These units were used in the development of a case record, since, according to Merriam (1988), "the goal is to be able to locate specific data during intensive analysis. The data, therefore needs to be organized according to some scheme that makes sense to the investigator and then indexed accordingly" (p. 126).

These units, within each category, were indexed and coded into categories representing emerging themes or concepts, by use of a computer program called "The Ethnograph" designed for this purpose. To devise these categories, the researcher constantly compared one incident or unit of information with another in the same category (Glaser & Strass, 1967, p. 106). On intuitive grounds, it was determined if that incident was "essentially" similar to that category, if not, it represented a new category (Lincoln & Guba, 1988, p. 134). These emerging categories and themes were reviewed by an independent peer. Also, throughout this process, feedback and assistance was solicited from the researcher's committee to ensure that what the researcher had developed was appropriate. The next step, following from comparing incident with incident, was the "comparison of incident with properties of the category that resulted from initial comparisons of incidents" (Glaser & Strass, 1967, p. 108). The emerging themes from the categories were also discussed with the researcher's committee members to solicit additional perceptions and changes that may be required.

Any documents provided by the company were examined to obtain a better understanding of the company and to provide additional information to that provided during the interviews. However, no analysis of the documents is provided in this thesis.

Data Trustworthiness

Naturalistic studies are often criticized for lack of rigor. Many conventional researchers consider naturalistic studies to be sloppy and undisciplined (Lincoln & Guba, 1985). Thus, it is important, by the researcher, that the necessary steps were taken and demonstrated to ensure trustworthiness of the study.

Internal validity, external validity, reliability and objectivity are the conventional criteria for trustworthiness. Guba (1981a) proposes that these conventional terms, due to the nature of naturalistic inquiry, should be replaced with new terms; these he has named "credibility" (in place of internal validity), "transferability" (in place of external validity), "dependability" (in place of reliability), and "confirmability" (in place of objectivity).

Credibility

Lincoln and Guba (1985) state that in order for the researcher to demonstrate the validity or truth of a study, depends on whether "he or she has represented those multiple constructions adequately, that is, that the reconstructions (for the findings and interpretations are also constructions, it should never be forgotten) that have been arrived at via the inquiry are credible to the constructors of the original multiple realities" (p. 296). Thus, to ensure credibility of the study the researcher must first "carry out the inquiry in such a way that the probability that the findings will be found to be credible is enhanced and, second, ...demonstrate the credibility of the findings by having them approved by the constructors of the multiple realities being studied"(p. 296).

In this study the following techniques were used to accomplish credibility.

Triangulation

The researcher ensured that multiple data collection methods were used. The data were collected from a wide range of sources including interviews, critical incidents, journal entries, and company documents. By using multiple and different sources of information the researcher was able to triangulate the information to ensure that the findings and interpretations were found credible.

Member Checks

Throughout the study, the researcher rechecked the data and interpretations with those who provided it. During the interviews, the researcher asked the interviewees to confirm the accuracy of the information presented. Also, questions were asked in follow up interviews to clarify and/or confirm issues brought out in earlier interviews. Categories and themes that emerged in data analysis were checked and clarified by the participants.

Peer Examinations

The committee members and a colleague were asked to comment on the findings as they emerged. Also, a colleague listened to a tape while reading the transcript to ensure authentic reproduction, and reviewed and verified the researcher's coding for that same transcript.

Prolonged On-Site Data Gathering

Data gathering was done over four months. This allowed for a greater understanding of the "culture" of the site, "testing for misinformation introduced by distortions" either of the researcher or the participants and building trust (Lincoln & Guba, 1985, p. 301).

Researcher's Position

Clarifying the researcher's assumptions and theoretical orientation at the outset of the study outlines the researcher's personal positions towards the study.

Transferability

Lincoln and Guba (1985) state that the "conventionalist expects...to make relatively precise statements about external validity..., the naturalist can only set out working hypotheses together with a description of the time and context in which they were found to hold" (p. 316). Hence, the researcher can only provide "the thick description necessary to enable someone interested in making a transfer [to another context] to reach a conclusion about whether transfer can be contemplated as a possibility" (p. 316). Thus, the researcher attempted to describe informally, and in detail, the issues of the study. Whenever possible, direct quotes were used in the hope the reader could become more immersed in the research site.

Dependability

Dependability, rather than "reliability," of the results is thought to be more consistent with qualitative research (Lincoln and Guba, 1985). Since qualitative research "seeks to describe and explain the world as those in the world interpret it," (Merriam, 1988, p. 170) and "reliability" depends on something tangible and unchanging, "dependability" is a more appropriate measure of data trustworthiness. Dependability seek concurrences with the results and does not require "outsiders [to] get the same results" (Merriam, 1988, p. 172). So given the data collected, the researcher is concerned with outsiders concurring with the results, that they are consistent and dependable.

By clarifying the researcher's position throughout the study and through the triangulation of the research data, the researcher ensured the results were dependable. Moreover, a trail, consisting of detailed information of how the data were collected, how categories were derived and how decisions were made throughout the inquiry, are highlighted throughout the study to ensure that an independent party will be able to follow the process of the researcher in the development of this study.

Confirmability

Scriven (1971) states that "subjective means unreliable, biased or probably biased, a matter of opinion," and "objective means reliable, factual, confirmable or confirmed, and so forth" (p. 95-96). Hence, for a study to be objective it must be confirmable. For a qualitative research study the emphasis of objectivity is no longer focused on the researcher and his/her instruments but on the characteristics of the data themselves (Lincoln & Guba, 1985, p. 300). When data are confirmable this means that the findings of the study are determined by the participants and conditions of the study and not by the "bias, motivations, interests, or perspectives" of the researcher (Lincoln & Guba, 1985, p. 290).

Confirmability of this study is enhanced by an audit trail and triangulation. Also, a journal was kept by the researcher. This journal helped to provide data about the researcher bias and information about methodological decisions made and the reasons for making them.

In summary, by adhering to the criteria for trustworthiness, the researcher bias and other limitations of this study are alleviated to a great degree.

Ethical Considerations

The following measures were undertaken to address the ethical concerns of the participants:

- Dow Chemical was advised by the researcher as to the purpose of the study, the degree of commitment that would be required by their employees, the specific activities in which they would be involved and the ethical standards that would be practised by the researcher.

- Each participant was advised by the researcher as to the purpose of the study, the degree of commitment that would be required, the specific activities in which they would be involved and the ethical standards that would be practised by the researcher.

- Each participant was required to sign a consent form. This form was explained to them by the researcher. The signing of the consent form ensured that the participants were aware they had the right to opt out of the study at anytime, that all identifying information would be disguised to ensure anonymity and confidentiality, that they had an understanding of how the information would be used and that they had a right to contact the researcher or the researcher's advisor on additional questions they may have had concerning the study.

- To ensure anonymity of the participants, each participant was assigned a number and pseudonym. All identifying information was disguised or withheld both in writing of the thesis and in discussion with the investigator's committee, and all tapes were destroyed on completion of the thesis.

- In accordance with the University of Alberta requirements, the research proposal was approved by the Ethics Review Committee of the Department of Adult, Career & Technology Education.

CHAPTER IV

RESEARCH FINDINGS

Introduction

This chapter presents the findings of the study including the experiences, views, thoughts and opinions of the participants' on learning informally to be a team player. The participants' responses were coded under three major themes which emerged from the data: 1) learning from experience; 2) individual characteristics that enhance informal learning; and 3) the organizational context. Although the major themes are presented as separate and distinct, some overlapping naturally occurs. Quotations from the data are used to illustrate concepts or themes derived from the data analysis.

Learning From Experience

Learning from and through experience emerged from the data as a general theme as a means to learn informally to be a team player. The participants learned by making sense of daily occurrences. This learning was found to be highly influenced by their context, the work environment. The major categories that emerged from the data are learning from past experiences, learning within a team, learning initiated by triggers, and reflection used in learning.

Learning from past experiences

Learning from past experience was considered significant by all participants as an informal strategy to learn to be a team player within the work place. Notable experiences were not limited to the workplace, rather encompassed all areas of their lives. One participant commented, "your past experiences definitely have an impact, all your experiences over your life...help mould you...."

Participants cited examples noting how their past experiences impacted them as a team player. One interviewee focused on when he was younger and working for another company. He felt that his supervisor "was not really a team player" and "did not teach his people very well" and to him, "that's was a totally negative situation." Today he looks back at those experiences in fostering team work, and tries to be conscious of what "doesn't work." He elaborated, "You must be conscious of some of these things in the past, be conscious of what happened or what transpired."

Other participants cited examples where past experience with team sports had influenced them as team players. One participant stated, "For me, it started when I was at school participating in teams, sporting teams, teams that you would be exposed to at school." A similar view was described by another participant, "team sports...I think that's where my attitude towards being a team player and having fun comes in."

Among the study participants there was an indication that work experience, as a result of changing their jobs within the company, had impacted the participants as team players. Having had a variety of work experiences, the participants had been exposed to different perspectives and thus, developed the skill of seeing a situation from another party's point of view. Such changes required learning new ways of doing things, and to adapt and learn about the unique characteristics of each particular job. One participant explained:

> First of all it caused me to undergo change from one working environment to another and...to learn from it. You meet new people, you're introduced to new systems, and to all new working environments. I think it has been very healthy for me as a team player within the company.

Almost all those interviewed identified how learning team building skills was enhanced if they had some past experiences with the topic or situation. One participant indicated how past experience affected her learning:

> If I was in a training course and part of what I was learning I could

> apply or hinge to something that I already have experienced, then it was much easier to learn. But if it was something totally new and strange and couldn't apply it, it was much harder to learn.

Another participant, in discussing about an incident with an employee, commented, "I don't know if I had read it in a book, that I would have done it any differently." He continued to add, "by actually having the experience take place has helped me to learn how to deal with a similar situation..., it is impregnated in the back of my brain." This participant also commented about the difficulty in using team building skills learned from formal training, "without actually having the experience." He elaborated on attending his first team meeting, "when you do all that training and you go over to your first meeting, all your training just falls apart, it never goes how you think it will." Another interviewee indicated that, as a team player, the actual experience and not the training had the most impact, but felt that the training had made him deal and learn from his experiences within a team environment.

Learning within a team

Learning to be a team player within a team was mentioned frequently by participants. One participant suggested that to become a team player, at times, was a matter of survival within a team. She cited an example where she started with a new department. In doing so, she "went about...[her own]

business," and "did what had to be done." After a while she realized "you can't do this" since "to get the job done and to get it done properly you have to work together as a team." On reflecting back over the experience, she commented, "I didn't think I could do it once I got thrown in to the job. I learned that, yes, I could, it was a pretty good feeling."

Other participants indicated how they used informal learning strategies within a team to be more effective team players. One interviewee reported how she used the same techniques, such as "observation, listening, hands on, copy catting and experimenting" individually, and within a team. "I still would be asking questions, I would still be making hasty notes, I would be still doing the same type of inquisitive learning that I would be doing as an individual that I would on a team," asserted the participant. She also commented that not only do you "learn within a team," you learn a little bit more on each different team that you participate on, "you learn to sit back and read people." In participating on teams, this participant commented on the personal learning that occurred for her:

> I've learned that I'm quite willing to be the first person to step forward and take on a job..., I'm able to adapt to different situations and changing situations...and can function within the team and have something really important to offer to the team as a player.

There is evidence within the data that the team facilitator performs a role as an informal coach to the team players. This informal coaching provides a means for team members to learn to be team players within a team. One participant discussed his initial learning when starting to attend team meetings, "people with the biggest mouths got most of the air time and the quiet people just sat in the corner and took whatever was coming down." But by the "facilitator doing his/her job," that is, the facilitator asking members, "do you have an idea, do you have any input here, and can you give your opinion," you learn to speak out, "so eventually you get to the situation you just do it..., knowing that you are not going to be stomped on for giving an idea." He noted that his confidence within teams had been enhanced by the facilitator doing his/her job. He explained:

> That's all we really had [actual experience, little formal training] and I think I basically got it from being in team environments and being involved as requested to the point where eventually you get more confidence in saying I got an opinion on that, this is what I think. So I think it is, probably, confidence in people.

Most participants in this study felt that their ability as a team player was significantly enhanced by the company providing the opportunity to learn within a team.

Learning initiated by triggers

There was evidence in the data to suggest that the most significant learnings considered by all of those interviewed were initiated by an external event or trigger in their lives. Learning triggers, such as work related problems, divorce or death, evoked emotional reactions of stress, fear and loss of control. The emotional impact of these triggers were mentioned frequently by the participants. One participant explained, "it [the event] had a high impact on me,...that could be due to the nature of the hostility of the discussion that took place and the emotion that was there....It's there in my head now." Other participants discussed how the emotion is tied into the learning, as this participant indicated:

> I think when you have a trigger incident you are definitely going to remember your feelings. There are incidents that have happened in my life, I can think back and if I really concentrate of them I can almost feel the emotions that I felt at that time. It would surge forward for just that moment and you will remember the things that you learned because of it.

The context of this learning, suggested by the participants, may or may not have had anything to do with being a team player, but the learning that resulted from the event did. Uncertainty, conflict and life crisis emerged as three sub-categories as a result of the learning triggers experienced by the participants.

Uncertainty

Participants cited examples where informal learning was triggered by work events which created feelings of uncertainty. In one case, the participant discussed how the lack of expertise of the contractor created uncertainty over safety issues in taking down a plant. This was a new project for him and he was relying on the contractor's expertise for the actual dismantling of the plant. He commented how he felt at the time:

> I think I expected this high level of expertise. These people who were coming in to do this job...were a pretty shoddy group of characters.... We were frustrated, we were really uncertain how this job was going to proceed...uncertain about the safety aspect.

By working with the contractor and making use of their assets, the project was successful. As result of this experience, he asserted that the event "affected the way...[he] dealt with people in teams." He commented that he learned to "accept people for what they are" and that everybody can contribute in some way. Furthermore, he recognized the importance of being open and "making sure the lines of communications are always open so you know what that person really thinks."

Conflict

Participants cited examples where informal learning was triggered by work events which evoked conflict and confrontation. One interviewee, when responding to a manager complaint about an employee of his, "went straight down and jumped on the employee" without soliciting his or anybody else's input. "Talking to the employee," he commented, "turned out to be very stressful because of the hostility of the discussion that took place and the emotion that was there." Once he got the employee's side of the story he felt like a "jerk" since he "accused instead of approached the employee to get some input." The learning outcome of this event, according to the participant, was the necessity to do "your homework," "get all the data," "ask more questions" and "get everybody involved." Also, he suggested, "you learn that managers are not always right either, they can make mistakes too."

Another participant commented on the changes in his life when forced to deal with a friend, as an employee, after being promoted to a supervisor. After several months he realized that his friend would not be able to function in the transition to computerized maintenance systems and would, ultimately, limit the growth of the working unit. This started a year of conflict and confrontation. However, in the end, this situation had a positive impact on both individuals. The participant indicated that at the beginning of this event, he "concentrated on the equipment" and his own "needs to succeed, not the individuals." Two years after his promotion, he recognized the significant impact this event had on his life, and indicated, "to me I have learned a lot more from this experience than anything else." He commented on the learning, "One of the most important things that I learned was that people were more important than equipment,...deal with a person up front and not behind his back, and...not to let work bother me so much at home." He felt that he is more tolerant with people and does not "dismiss their thoughts and concerns or their feelings." The repercussions of this event went further than work and home, in the past couple of years he had been extensively involved with community work and team sports. As a team player, he suggested he had learned more from this event than any training. He noted that a few years ago he would "dismiss things I did not want to hear within a team environment or if I did not think it was worthy, well, I just ignored it." "But this experience," he stated, "makes me respond differently within a team. It's interactive both ways,...but I have to work at it, it's not something I can do naturally."

Life crisis

It was evident in the data that a divorce or death in the family significantly altered how the participants approached their work as a team player, and their life in general. One participant, after a divorce early in her career, discussed how she "changed and grew", and credits the event to contributing to her success at work and as a team player. The divorce triggered the realization that she had some "inner strengths." She learned, "I should go with my own feelings,...speak and stand up for myself...and that you can't be intimidated by somebody unless you allow somebody to intimidate you."

Another life crisis a few years later was her mother's death which again impacted not just her work but her entire life. She commented how her mother used to always tease her by telling her to "Never let the mud dry under your feet," which, after her death, prompted her to seek the opportunities that were out there and not let them go by. She speculated if her mother had not died:

> If she were still alive and I hadn't realized that life could be that short, I might not have taken the opportunity to ask the company to transfer me out west. I might of stayed safe and sound in the my home town.

Reflection used in learning

Among the study participants there were indications that a reflective process was utilized to examine various aspects of learning from experience. The participants indicated that they used reflection to examine how one's own attitudes, values and beliefs affect one's work and interactions with other organizations members. One participant suggested that he was "critical of myself." If he was angry with another employee he would go back and think about it, to determine how he contributed to the situation. He indicated that it was "kind of critiquing yourself internally, how would I do it differently." A similar view was described by another interviewee:

> I look at the situation or analyze it more in-depth than just looking at the surface. You got to look at not just what is in front of your eyes but what is behind them, how did I impact that.

Another participant suggested that the first step "to learn new ways of doing" was "... not excepting the status quo" and to identify and explore alternative perceptions and ideas within the company.

Other participants indicated that self reflective conversations were used when evaluating the results of their actions. One participant commented that self-reflection "... helps you understand yourself." In doing so, he questions himself, "Why did I looked at it that way and why I shouldn't of looked at it that way."

It was evident within the data that the participants of the study utilized reflection within the context of a team meeting to enhance their learning. One participant commented that reflection helped himself "to get focused on what your impact maybe on the team" since it generated "reasons or some of the benefits of being there." Another participant discussed how he reflected on events or actions to assess results. Within a team environment, he explained, depending on what he was working on, he would reflect on "what did I get out of that, what did I learn from that, what do I need to do differently..., can I apply that to something, or did I learn something that I could use here...." But he commented that if things are not going well "you probably spend even more time reflecting back..." to understand what went wrong and "make sure that it is embedded in your memory banks."

There is also evidence that the participants developed strategies for facilitating systematic self-reflection. One participant commented about using "hasty notes" within a team meeting for that purpose:

> I tend to make hasty notes, then I will go through it in my head more clearly and think, my hasty notes said I did this in this manner, now lets stop and think about that, did I do that because it was just a hasty decision....

Almost all those interviewed identified the importance of reflection on mistakes or on trail-and-error experimentation. One interviewee recognized mistakes as learning experiences, "because if you forget the mistakes you end up making them again." A similar view was described by another participant in that one had to reflect on past experiences and how they were handled in the past. He commented that reflection on past mistakes had helped him learn to prevent similar situations.

Other participants discussed the process of reflection brought on by a mistake and the learning that he or she came to recognize. One participant reported, "I would ask myself why did I do that, why did that happen..., and what was my perception of that problem." She suggested that, "You can't get bogged down making a mistake because you learn by doing...." Another participant with a similar view stated, "I look at each mistake and say why and how can I prevent that from happening again and how could I do that better." One interviewee commented on the good things that come out of a mistake. He recognized that "maybe we made a mistake by hiring the contractor [for a project] in the first place but what ended up being was a lot of good things...."

Individual Characteristics That Enhanced Informal Learning

All of those interviewed identified and cited examples of individual characteristics that enhanced their ability to learn informally to be a team player in the workplace. The major categories that emerged from the data were proactivity, mutual understanding through discussion (dialogue), the big picture (system view), creativity and listening to intuition.

Proactivity

To be proactive, as a team player or as a individual employee within the workplace, was mentioned frequently by the study participants. It was evident in the data that to be proactive not only provided the interviewees with the drive to take advantage of opportunities and experiences that were presented to them, it also enhanced the learning from these opportunities and experiences. Four sub-categories emerged from the data which exhibit proactivity; being open to change and adaptivity; willingness to take a risk; attitude; and being receptive and willingness to learn.

Almost all of those interviewed identified being open to change and adaptive to their environment as important to their informal learning. One participant commented on the necessity to change and adapt to their work environment:

> You walk into this room with so many people, you know that everybody is not going to change. It is easier to change the process,...than it is to change a whole pile of people. So what you have to do is to change to suit the environment.

Another participant suggested that to be open to change is in itself a challenge:

> You have to look at the job as a challenge and if you are going from an individual job to a group environment that's a challenge for you to

> change, to become a group member. I mean if you are not open to any kind of challenge, I don't think you will ever change.

Most participants indicated that their ability to adapt and change contributed to their success as a team player.

Among the study participants there was an indication that to be proactive there must be a willingness to take a risk. One participant commented it was a risk to change jobs within the company due to the uncertainty of the new job, but felt it was worthwhile since it enhanced their work experience. Other participants suggested that taking a risk was integral to success within the company, "You have to take risks to succeed, if you don't take risks you never get farther ahead, absolutely." Furthermore, there was evidence of assessing risk based on one's past experiences to determine if the risk was warranted, as this participant indicated:

> To some degree I take risks but also trying to use your experience in assessing how much risk that is. Going out and doing things that no one else has done. Definitely, you have to use your experience and knowledge to assess the risk and definitely to take some risk and I think you have to do that, to be successful.

The attitude of an employee was suggested by all participants to impact the level of learning in a given context. One participant stated that your attitude was integral since, "if you want to get somewhere you must want to do it" because "nobody can make you do what you don't want to do." Others noted that having a positive attitude benefited not only themselves but others in the working group to understand and accomplish the goals of the group. One interviewee observed that, "if you have a person who is positive he will approach the team in a positive fashion" and in fact, this participant in selecting team members, considers a positive attitude critical.

Being receptive or willing to learn was mentioned frequently by the participants. In some situations people may choose not to learn due to other priorities, disinterest in the situation or the fear of change. Thus to enhance informal learning one must be receptive and willing to learn from the situation. As one participant explained:

> I think that learning in an informal way takes place if the person is receptive to do so because the opportunity is always there to learn something and I know in certain instances I have turned down the opportunity,...I turned it down because it is not a priority for me. That is why I say you have to be receptive to it, otherwise I may block it out and not choose to learn anything.

In an example cited by this participant, she saw an opportunity to learn when a strike reduced the number of employees in her department and quickly noticed that it was "apparent that there just were not enough bodies to go around to get all the jobs done". She stated, "So number one it needed to be done, nobody asked me if I was interested in doing it, I saw an opportunity for me to learn."

Mutual understanding through discussion: (dialogue)

There was evidence that the study participants learned from discussion, but this learning was enhanced when the emphasis of the interaction was to obtain a mutual understanding of one another. As one participant indicated, "Your speaking skills, your ability to get your ideas across, and to explain them so they are understood by the other team members" are essential to the development of a team player. Another participant stated that the "best way...to learn is through interaction" since it "provides another view."

Participants identified basic components which they recognized as vital to achieve mutual understanding. These components are the respect for others, database decisions (full disclosure), feedback, listening and questioning.

The first of these factors is respect for others on the part of all team members. The data also revealed that the respect for differing opinions and expertise was essential to promote a learning environment. One participant stated that to assist new people in learning to function within a team, the team members must "respect the individual for what they are, work with them, talk with them and make them feel that they are an equal person...." Another participant suggested that respect for others means one had to "use sensitivity" when dealing with other team members. She recognized that "you want to treat people in the way you would want to be treated, "therefore you have to choose your words carefully when giving a response to an idea "that you might think is absolutely ridiculous..., so your imagination has to be going."

Database decisions (full disclosure) was described as the second component to promote mutual understanding. Participants cited examples where decisions or opinions were "backed up with data" to ensure disclosure of underlying assumptions and facts inherent in the decision. As one participant explained, "You need to explain the 'why's'." A similar view was described by another participant who declared that one needs to "look at things systematically...ensure the data is there and available, less gut feelings, we call them database decisions."

Feedback, also was revealed in the data as the third component to mutual understanding through interaction. Different uses of feedback emerged from the data, one of which was to receive an "outside opinion." One participant felt that this was important, "because you get that outside objective, someone looking at it from a different view point." A similar view was described by another participant who asserted, "If you are on your own and you're doing and experimenting, you do learn but it's only your views of what you are doing wrong." Other participants related that without feedback from a boss and team members, mutual understanding cannot be obtained and learning is inhibited. As one interviewee, upon reflection, commented on her experience, "If you are doing a bad job, everybody complains but they don't complain to you, so you do not get any feedback and you go on doing the same things." Among study participants there were an indication that feedback not only provides better understanding of the other person but also of oneself. This participant discussed how he learned about himself through feedback when participating in teams:

> Maybe the greatest thing I learned about myself, I think, is that sometimes we don't give ourselves enough credit for some of the things we do and how well we do something or how hard we work. That's something I have learned from participating in teams through feedback, it's the perception of what people think about you.

Participants identified listening as a fourth aspect to ensure mutual understanding. They mentioned that not only do you have to listen but you have to understand what is being said. For example, one participant commented on listing skills in a non-routine situation:

> Put your listening skills to use, and really listen and ask and find out what is this person asking for, what does this situation call for and what is going on. Because if you don't use your listening skills and decipher what is being said to you, you might go off in the wrong direction and work really hard on the wrong thing.

Other participants identified how working on teams have encouraged them to develop their listening skills in order to understand other peoples points of view. However, participants found that the attitude of a team member could impact the level of understanding of what is being communicated by other members. One participant suggested that the attitude, "We are doing it this way," promoted a reactive and negative response by other team members and consequently, inhibited listening and the possibility of understanding the points of view of others.

The final aspect to mutual understanding that emerged from the data was the use of questioning. Questioning took several forms. There was the asking for help, support, information, meaning and understanding. Among the participants there were an indication that asking for meaning and understanding was critical to the development of mutual understanding of each other and the context in which it resides. Some participants stated that without asking questions there cannot be a true understanding of the situation since one is not testing their own perceptions and assumptions. One must "solicit ideas, their perceptions, so you get a better idea, better flow of information" about what is happening around you, according to one participant.

The big picture: (systems view)

Participants of the study discussed the importance of understanding how they fit into the big or whole picture and the importance of viewing the company as a whole and not as isolated parts. One participant used the analogy of a chain where each link represents different functions within the company. To understand the whole picture an employee must understand the function of each link and the inter-relationships these links may have on each other. She asserted that in being a very inquisitive person she had never been satisfied with being told "mechanically" what to do and "have always wanted to know more about the big picture."

Another participant mentioned how too many people "get caught up in what's in it for me directly" and "how does it affect my specific job" or "get caught up thinking little things are important". He explained that the focus must be long term, and ultimately, the company's success, thus an employee must look beyond the direct benefit for one's self or the work group. The employee must "see things as a whole" or as an integrated unit and not isolated pieces. Being a supervisor, he indicated "that's where I come in, to help them see how the whole thing fits."

Creativity - a way to see change

There is evidence in the data to suggest that creativity facilitates informal learning since it enables people to challenge and change the normally held point of views, allowing for new concepts and ideas to be developed. One participant expressed how "your creativity allows you to be able to express your sense of humor within the team." She observed that through the use of this creative humor, team participants were able to "really engage the team in a very lively conversation" which stimulated and brought forth more ideas. Another participant indicated that she used creativity to "look at things in different ways" and to challenge statements which were based on the premise that there was only one way, the right way to solve a problem or improve a process. As she commented, "I always look at something to make it work better." She takes pride in "doing things differently, making it better and making it more interesting."

Other participants mentioned how they try to use their creativity to challenge other employees' perceptions, ideas or solutions to problems. One participant commented how he try's to get people to look at the job in different ways by presenting alternate ways of seeing a given problem. The challenge, as stated by the participant, is to "try to get them to be innovative with their ideas and their thought processes," but he noted that this is only possible "as long as there is enough time to reflect on the project or job." He continued by expressing how creativity and learning are both inhibited without adequate time given to this process.

Listening to intuition

Three participants, two of which were women, described intuition as a "little voice" or "gut feeling" inside one's self providing an immediate sense of what is right. One participant noted how intuition, though uncertain about the process, impacted her decisions, "I can't really give a reason why, but you just feel one way is better then the other way." Both women considered themselves highly intuitive. They indicated that intuition was important in their decision making process, but noted that data and rational thought were used to validate or prove the initial intuitive idea.

Another participant commented on the merits of being intuitive in team work:

> Sometimes intuition can work in a group for me. I can sense if someone has an idea and holding back or they want to say something and they won't....So your intuition comes into play because you might be able to pull that person back into the conversation....

This can benefit the team, she suggested, since it creates an opportunity for these people to provide input which may generate new ideas or challenge currently held views of the team.

Organizational Context

The final of the three themes is organizational context. All of those interviewed identified and cited examples where the context of the organization enhanced their ability to learn informally to be a team player. Most participants stressed that their learnings were context dependent and suggested that the organizational context within Dow contributed significantly to their development in becoming a team player. In reviewing the data, seven categories emerged regarding context: working environment; learning atmosphere; employee empowerment; shared vision or goal; experimentation; coaching; and networking.

Working environment

All those interviewed identified that the working environment of their work group and the company enhanced learning. The participants commented on different types of working environments which facilitated their learning and understanding to be a team player. An environment which was informal, open, and light hearted, where respect, cooperation and trust were present was regarded by all participants to be critical. One interviewee commented, "it is getting along well [with the other team members to the point] where you are actually having fun doing the job, that makes all the difference...there's no comparison, it's tremendous." Another participant elaborated on the negative impact a working environment can have on an employee without these key characteristics:

> If you have somebody in a work environment who's being put down by other people in the work environment and being very negative towards them, probably in that environment they are not going to be doing a great job. They are probably doing the basic job....In that environment, even if they went to another team, they are not going to be open with their ideas.

A similar view was discussed by another participant who commented how the working atmosphere restricted her own learning and growth. She elaborated on the lack of openness and trust within the work group:

> If you spoke your mind it was not to the person. It was either you muttering it to yourself or talking to somebody else behind their back which was not a great working environment.

One participant indicated how the working atmosphere contributed to changing her own perceptions and assumptions of team work in her first work group experience:

> Probably the fact that you couldn't really do what you wanted was almost, well, you felt like you had somebody breathing down the back of your neck, always watching out for what you were doing. It was almost, not really an un-trusting environment, but I mean the fact that somebody was always looking out for you, making sure you are doing the job. I guess you could call it un-trusting because that's probably what I thought of everybody there...."

She soon realized that she could not do the job on her own and had to rely on other people. In doing so, her perceptions of the working atmosphere soon changed and she learned to trust her fellow workers:

> You learn that the people are not really looking over your shoulder to see what you are doing. They are trying to work with you to do the job. I find it a lot more open and friendlier....It's more enjoyable.

Other participants recognized the necessity for openness within their work group. One participant commented that he "tries to create an open atmosphere" and feels that "most of the time people can see what's on their mind...that's pretty well encouraged, definitely in my job and my work group."

There was evidence that learning was enhanced when the context was informal. One participant suggested that he found that his own learning on the job benefited from an informal atmosphere. He noted, "...the context may be very specific or very complicated but I think it makes learning easier if the surroundings are informal...."

Participants of the study discussed and cited examples in why they found the company to be open. One participant cited an example where a change within the company, "did not come down from management' but was initiated from the bottom. He stated, "I find it very open that way. It [the company] is not just top driven....To me that was a good example of openness by management." Another interviewee asserted the company is "open to ideas" and "the doors are never closed." As she commented, "The company is made up of people and the people I have encountered have been very open, so I view the company as being open." There was evidence from the data that this openness contributed to the participants' understanding and learning to be a team player within Dow. Participants gained understanding through communication on team accomplishments and expectations of team performance. Most participants cited examples where teams were free to form and encouraged by the company to deal with problems encountered by employees at all levels.

Learning atmosphere

Within the organization, participants commented that Dow encourages continuous learning, both informal and formal. One participant, in citing an example where informal learning to be a team player was facilitated, indicated that it was due to the fact that the team leader "encouraged a learning atmosphere." She continued to add that the atmosphere was open and relaxed so it encouraged people to come forward and contribute.

Almost all participants indicated how a culture of continuous learning, promoted by the company, had enhanced their ability as a team player. One participant noted that management, "are open to you constantly improving your personal skills and they have demonstrated that by encouraging you to go and take courses." Another participant stated that, "the culture has enhanced team work" since management "lets supervision determine the level of training the individual would need to suit his own requirements and the companies." Other participants commented that they feel free to learn and experiment on the job and are rewarded and supported by management to do so.

Employee empowerment

There was evidence to suggest that employee empowerment promotes informal learning. The participants of the study suggested that employee empowerment provides the opportunity to take ownership and responsibility for one's own actions and allows for greater participation in decision making within their job and the company. One participant noted that empowerment is "virtually owning the task." All participants felt that they themselves were empowered by the company and recognized the importance of empowering their staff. As indicated by one participant it is a difficult process:

> ...we are currently trying to empower our employees, give them the responsibilities to make their own decisions and go with their own thoughts and ideas. That is very difficult if the individual has been used to 'you do this, now!' because they don't trust you or themselves yet,...you have to coach in that environment.

Another participant cited an example where empowerment of the team members resulted in international recognition of the team's efforts. In reflection, she stated that, "If I just went ahead and did it, it would not have been successful." In doing so, she provided the opportunity for the team members to take control of their own job and to take responsibility for the changes within their job. She indicated that, "You have to let them know that they have control of the process and they are the boss, you are just there to help them." The interviewee talked about "respect," "giving them the benefit of the doubt," "getting them involved," "asking them questions all the time" and "learning together" as important factors in this process.

Voluntary attendance or the right to choose to be part of a team surfaced from the data as an aspect of empowerment. Almost all the participants indicated that the quality of their contribution and their own learning was enhanced when it was their choice to be on a team. One participant commented that the success of one team was due to voluntary attendance. The team succeeded since the people who volunteered "felt strongly about the issue" and wanted to contribute. Another participant expressed his frustration when being assigned to a team "that you should not be on or cannot contribute to or feel you can't contribute to," but unable to do anything about.

Other participants commented on managements role in empowering their staff and fostering team work. One participant asserted that to feel empowered you must "feel that you are the most important thing that's going to make it happen." He indicated that management plays an important part to encourage and foster empowerment and teamwork and "if they are not encouraging people to do that then they become a barrier."

There was evidence in the data that because the participants determined for themselves what they wanted to learn within the informal learning process, it appeared that they had a better opportunity to "empower" themselves than they did within a formal learning environment. One participant commented that when learning is informal they had "control of...[their] learning." A similar view was described by another participant who states, "You learn something formally and then you go back and never use it or it is not the same,... learning informally I learn what I need to know at the time it is needed."

Shared vision or goal

Among the study participants there were indications that their learning experiences within the team and the effectiveness of the team were enhanced when the team members all shared a common vision or goal. Participants cited examples where teams pulled and learned together to accomplish unattainable tasks due to a common vision or goal. One participant forced into a team of untrained personnel, due to a strike, indicated that the team was successful, since "we all had the same goals in mind," thus it was easier to "work and learn together." A similar view was described by another participant in a similar situation, "What made it effective was that it was a goal that everybody on that team felt."

Not only was it evident from the data that a common goal or vision among team members facilitated the effectiveness of the team, but a shared vision and/or philosophy of the company also facilitated the effectiveness of the team. One participant stressed the importance of a vision as a 'goal' and not a 'word without any meaning':

> We need to keep Dow's vision and philosophies in the background, but you need to be aware of the meaning of that and not to think it's just words. I think sometimes out in the real world they lose sight of the vision. They [employees] need to realize that we need to be all focused on that.

All those interviewed were fully aware of Dow's vision and philosophies. They indicated that through, "lots of communication" on a daily or weekly basis, and a variety of sessions or tapes from the president on what the overall objectives are and what the expectations may be, was the key to their shared understanding of the vision. One participant commented on how communication was critical to make sure everybody knows what management wants to happen. He commented, "It's to the ground floor, so everyone knows what needs to be done and what direction we need to go."

There was evidence that there is a definite sense held by the participants of how Dow's vision and philosophy fit into their daily work. A participant cited an example where an outside contractor's philosophy became a barrier, "a barrier in the way the contractor perceived how he should be able to do the job," since it was "totally different from Dow's philosophy." He commented on the situation:

> He wanted just to bash it down, get the job done and we didn't want to do that. We wanted to take it down in a orderly fashion, piece by piece, make sure it was cleaned because some of the stuff was going off site and we wanted to make sure that we could guaranty the integrity of the parts. They definitely had a different philosophy in how that should be done.

Another example was cited where a team and a common vision worked for an employee and the company, in resolving a personal problem. The participant explained that "everybody was pulling that way" and focused both on what was best for Dow and what was best for the employee, it was a "win, win situation."

Experimentation

It was evident from the data that Dow's organizational culture supported and encouraged experimentation by employees within the company. One participant commented that they are encouraged to be innovative through experimentation, "to try to do things better, to be more efficient." Almost all of those interviewed indicated how this philosophy had facilitated their own learning within their job, by providing the opportunity to learn through trail-and-error.

Other participants commented about the use of experimentation within a team, to learn other ways of doing things, to learn to be a team player. Participants would observe different behaviours or techniques used by other team members which they would experiment with in other team environments. One participant focused on the development of speaking skills within a team:

> I might observe somebody who I perceive is a good speaker and see them doing a certain type of thing when they are speaking and I would

> then experiment using that myself.

Coaching

Almost all of those interviewed suggested that their development as a team player was enhanced through coaching. Coaching, however, had slightly different meanings to the participants depending on their own backgrounds and experience with coaching. One participant focused on coaching as a means of relating the underlying values and beliefs of the company:

> I consider coaching as giving them [employees] some direction as to what to do and where to go. Coach them into things that are right for Dow, in the sense of achieving the right results and the right approach when dealing with people.

He explained that coaching had helped him in "giving direction and guidance" and the "reasoning and rational as to why you are doing it this way."

Another participant takes a more personal view of coaching:

> ...to me a coach is more involved with the individuals, understands what people do, helps them out when they need it, and promotes more open communication. Coaches know the players better, what makes them

> tick, what makes them motivated.

He looks back to a coach in his high school days in having the initial impact on him becoming a team player. When reflecting back, he commented on his experience, "That was a positive experience for everybody involved, he was a great man."

Among the study participants there were indications that, due to the organization emphasizing team work and stressing employee empowerment, the role of the supervisor or manager was evolving towards a coach, a barrier remover and not a work director. One participant asserted that you can no longer tell people what to do when you are trying to give them the responsibilities to make their own decisions and go with their own thoughts and ideas. "You have to coach in that environment," asserted the participant.

Participants cited examples how their role as a coach, rather than a supervisor, could assist in the development of a work environment which fosters team skills. One participant discussed the importance of a supervisor to create a work environment to encourage his staff to become more effective team players:

> Obviously there is some formal training, but I think in general it is the work environment that encourages them to be team players. It is up to the supervisor to create a positive work environment...so when they do

> enter...a specific team outside their work group they will still continue to say and contribute their ideas and communicate with all the people in the work group....They definitely have to learn that.

He suggested that as a coach there are some things you can do to create this environment, that is:

> work with the individual one on one, ask for their input, ask how things are going, try to be with them just don't send them out to do their job....Show them that you really care about them, really care about how they are doing the job.

Another participant shared a similar view and commented that as a coach, "share and recognize each other success", and try to encourage an environment that fosters those successes.

Networking

The participants of the study identified the use of an informal networking system within Dow as a method of learning on their job. One participant commented on the available expertise within Dow, "there's a good network system within Dow so if you need help, for almost anything, you can get it." He indicated that a lot of organizations would not have access to the variety of technical people on site. Commenting further, he stated, "The resources are there if you need them, you just have to know where to get them and access that information, sometimes it is just a phone call away." The same participant indicated how he uses networking to assist in his own development as a supervisor and as a team player.

Summary

The findings of this study were organized into three themes: learning from experience; individual characteristics that enhanced informal learning; and the organizational context. Four categories emerged from learning from experience: learning from past experiences; learning within a team; learning initiated by triggers; and reflection used in learning. Within the individual characteristics theme, five categories emerged: proactivity; mutual understanding through discussion (dialogue); the big picture (system view); creativity; and listening to intuition. The final theme, organization context, seven categories emerged from the data: working environment; learning atmosphere; employee empowerment; shared vision or goal; experimentation; coaching; and networking.

CHAPTER V

SUMMARY, DISCUSSION AND IMPLICATIONS

This chapter contains a summary of the study including a brief description of the purpose, the research methodology and review of the major findings, followed by a discussion of their inter-relationships. Implications of for practice and future research conclude the chapter.

Summary of the Study

Purpose of the Study

Within current literature on workplace learning, researchers refer to the need for "learning organizations," based on "informal learning" and "formal learning," as a way for North American organizations to survive in a world of rapid change. However, one of the skills identified as being important in meeting the challenge of the changing workplace is the ability to work as a part of a team, to be a team player. But we know little, however, about what informal learning opportunities exist in the workplace, how learning occurs and how to facilitate this process. The purpose of this research is to study how employees learn to be team players informally in the workplace, their perspectives on learning informally in the workplace and what conditions, interactions and factors promote or impede this learning.

Methodology

This exploratory field study used qualitative research methods with elements of grounded theory to study how employees learn informally to be team players in the workplace. It was exploratory since the interest is to gain a better understanding of the phenomena of informal, spontaneous, and non-directed adult learning in the workplace, from the employee's point of view. Furthermore, no formal or complete theories regarding informal learning within the workplace exist thus a grounded theory approach seems appropriate.

Using Dow Chemical Canada Inc. as a research site, data were obtained from six employees selected, based on criteria outlined to maximize information, from the Fort Saskatchewan plant.

Dow Chemical, due to changes in the external environment, technology, and the workforce, recognizes the importance of a paradigm shift in the way organizations look at workplace learning, that is, the way employees function within and learn in today's organizations. Teamwork is one of the key methods chosen by management to elicit change within the organization making this a prime site for this research study.

Although in-depth interviews were the primary data gathering technique, other methods were used, for instance, critical incidents. By using multiple data collection methods, the researcher was able to gain additional information about the participants' individual insights and perspectives on the concept of teaming and how they learned to be team players in the workplace. Each participant underwent three audiotaped interview sessions. The interviews were semi-structured to enable the researcher to probe for more in-depth information and to gain a better understanding of the meanings held by the participants. Data collection sessions were adjusted to pursue specific leads based on what was found in previous interviews.

After each interview, a transcript of the tape was made, followed by repeated listening and numerous readings to identify the emerging themes and categories. To ensure trustworthiness of the data, the researcher utilized triangulation, to ensure that the findings and interpretations were found credible; member checks, to recheck the data and interpretations with those who provided it; and peer examination, to review, comment and verify the findings as they emerged.

Summary of Findings

The findings of the study were reported in chapter IV. Not every respondent encountered the experiences represented in each category, however, three themes emerged from the study that were fundamental to these participants informally learning to be team players. A summary of these major findings follows for each theme.

Learning from experience

Learning from and through experience emerged as a general theme in learning informally to be a team player. The participants of this study viewed life experiences as potential learning and looked to their jobs as a source for their learning and development. Learning experiences, however, were not limited to work but encompassed other spheres of their lives. Family, friendships and community were other areas of their lives which were considered as important in learning to be a team player. The participants used these experiences as a source to draw upon in developing and experimenting with new ideas which led to new ways of doing.

Experiences which influenced the participants as team players varied, but commonalities did exist between the participants. Participation in team sports, for instance, was common among the participants as an experience that had influenced them as team players. Also, there was an indication that work experience, as a result of changing jobs, previous employers, or work assignments, exposed the participants to different perspectives, which assisted in their development of seeing a situation from another party's point of view. Such changes required learning new ways of doing things, and to adapt and learn about the unique characteristics of each situation.

There is strong evidence to suggest that Dow's initial and continued emphasis on teams has had an impact on the participants in learning to be team players. Some participants of this study indicated that it was a matter of

survival at first, trying to operate within a team. Participants cited examples of different informal strategies they used to become more effective team players and the learning which derived from these strategies. Some participants suggested that the team facilitator performed a role of an informal coach to the team members. The facilitator coaches the members by designating expectations, appraising progress and providing feedback thus permitting team members to test assumptions and past learning in order to develop their own interpretation and meaning of being a team player. This form of coaching parallels closely Schon's (1987) description of a teaching relationship. Through dialogue with a student, the coach communicates and engages in "reflection in action." The student is learning by doing and the coach is "telling within the context of doing"
(p. 102).

These past experiences have influenced the participants' understanding of being team players, however, the most significant learnings considered by all of those interviewed were initiated by an external event or trigger in their lives. Learning triggers were comprised of two types: 1) work events which created feelings of uncertainty, conflict and/or confrontation, or 2) a divorce or death in the family. Each seemed to alter how the participants approached their work as a team player and their life in general. The context of this learning, however, may or may not have had anything to do with being a team player, but the learning that resulted from the event did. These events evoked a change in their perspective of themselves and the world. These results are mirrored in the literature. Merriam and Clark's (1991) research findings describe similar results:

> It is not the event in and of themselves, but the learning that we derive from these events--both the ones we can predict and the ones that come as a total surprise--that shape our lives (p. 217-218).

They found that learning was significant when the learning experience had a personal impact and was subjectively valued by the learner which involved expansion or transformation (Merriam and Clark, 1991, p. 208-209).

These learning experiences, initiated by triggers, evoked emotional reactions of stress, fear and loss of control for the participants. The sense of strong emotion is supported within the literature. As stated by Marsick and Watkins (1990) we cannot separate emotion from cognitive learning but people continue "to anticipate primarily cognitive, rational learning" (p. 235). As Boyd and Myers (1988) suggest, "As old ways of framing the world give way to new, individuals experience a sense of loss; grief work at some level may be needed if the individual is to move on (Marsick & Watkins, 1990, p. 235). Furthermore, Gloria Pierce (1991) indicates that it is the emotion within the experience which provides the catalyst to engage in learning and change (Taylor et al., 1991, p. 426).

Within this study, there is strong evidence to suggest that reflection was utilized by the participants to examine and learn from experience. This is supported by many researchers. For instance, Merriam and Clark (1991) state that, "For learning to occur, the experience must be attended to and reflected on" (p. 208). Reflection was used to examine how one's own attitudes, values and beliefs affected one's work and interactions with other organization members. In certain instances, the participants underwent a process of reflection, action and further reflection in order to derive meaning and understanding from an experience. To assist in the process of reflection participants turned to colleagues or friends to provide alternative perspectives and feedback. One participant suggested that by having an opportunity to be involved in a formal sharing session set up by the company, allowed him to share and reflect on a personal conflict within work. He found the session a powerful learning experience. Marsick and Watkins (1992) concurs with peer support. They state, "Reflective practice is easier when people get help from peers who can provide feedback that helps them see a situation from many different viewpoints" (p. 12). However, the authors state that work environments, physically or psychologically, are not set up for feedback (p. 12).

Much of the literature on learning from experience suggests the importance of reflection on mistakes or on trail-and-error experimentation (Marsick and Watkins, 1990). The results of this study suggest similar findings. Participants of this study viewed mistakes as learning opportunities and reflection played an important part in exploring, identifying, and assessing alternative perceptions in order to prevent similar situations.

Individual characteristics that enhanced informal learning

The participants of this study identified individual characteristics that enhanced their ability to learn informally, to be a team player in the workplace. All participants expressed, to differing degrees, that taking a proactive stance within their work environment enhanced their ability to learn informally. Some of the key components expressed by the participants in being proactive is the ability to adapt and change to new environments, willingness to take a risk, and being receptive and positive towards learning. The participants felt empowered to take the necessary initiative to seek and take advantage of opportunities and experiences that were presented to them. But in some situations they chose not to learn due to other priorities or disinterest in the situation. However, this non-learning stance was conscious, and does not suggest a victim-like, reactive stance to learning. These results tend to agree with Marsick and Watkins (1990) findings where they found the presence of proactivity influences the quality of learning (p. 28). They state that, "A proactive person will quickly take charge of his or her learning once pushed into the learning cycle" caused by a reaction to a set of events (p. 28).

There was further evidence to suggest that the study participants learned from discussion. This learning was enhanced when the emphasis of the interaction was to obtain a mutual understanding of one another. The participants suggested that in order to reach mutual understanding there needs to be respect for others, the respect for differing opinions and expertise of other team players. Furthermore, to obtain meaning and understanding required asking for help, support, information, and foremost, meaning, which is embedded with underlying assumptions and beliefs. Some participants discussed the importance of ensuring full disclosure of assumptions and biases which influenced on their decisions and opinions. Furthermore, there was an indication that feedback was critical to this disclosure, since it surfaced unconscious assumptions and biases and assisted other people to confront and understand their own ideas and meaning. These findings closely resemble Argyris's (1990) Model II social virtues. He believes that in using the Model II, social virtues will lead to a reduction of misunderstanding, error, self-fulfilling prophecies, and self-sealing processes. Ultimately, this leads to double loop learning.

Among the study participants there was an indication that creativity played an important role in facilitating informal learning and enhancing their ability as a team player. They placed a high value on this ability and sought and/or created opportunities to express it in the workplace. Creativity was used to challenge other employees' perceptions, ideas or solutions to problems, allowing for new concepts and ideas to be developed.

Furthermore, creativity provided the source for trying out new ways of seeing and doing things which did not always come easily to the participant. Reference regarding the use of creativity in informal learning was made by Marsick and Watkins (1990). They indicated similar findings, "Creativity...allows people to 'play' with ideas so that they can explore possibilities without censoring themselves or being censored by others" (p. 30). Consequently, in an informal setting, creativity played a more dominant role in learning to be a team player since the participants were free to experiment with ideas, concepts and actions without the disapproval of others.

Closely linked with creativity was intuition. The participants viewed intuition as a "gut feeling" about what was right without rational thought. Some participants felt that intuition assisted their creativity within the work environment, and, hence, informal learning. This tends to agree with Agor's (1991) research on how intuition can be used to enhance creativity in organizations. He found that intuition was most useful in informal settings by people who preferred informal styles.

Organization context

According to the participants of this study, the organizational context within Dow contributed significantly to their development in becoming a team player. The working environment in which the participants were exposed was based on respect, cooperation and trust within an atmosphere which was informal and open. Participants found that the environment allowed them to say what was on their minds, which helped them change their perceptions and assumptions of a team player. In the absence of these traits, however, they were restricted in their learning and growth. O'Connor (1990) concurs that to induce a team player concept there is need for employee trust and confidence within the workplace. She states, "[Management] must willingly confront and deal with the real issues at hand, and they must begin doing it by regaining their employees' trust and confidence" (p. 14).

Furthermore, this environment supported and encouraged experimentation by employees within the company. The participants felt confident and empowered to try out new and innovative ideas without fear of repercussion when a mistake was made. Thus, they could be innovative through experimentation, learning through trail-and-error. It is important to emphasize that the working environment allowed the participants to learn, to change and to come up with new ideas. They were able to influence things, believe in themselves, to be open and honest about issues they felt strongly about. This form of empowerment and/or autonomy provided the opportunity to take ownership and responsibility for one's own actions and allowed for greater participation in decision-making within their job and the company. These findings show similarities to the research by Senge (1991) and Pedler, Burgoyne, and Boydel (1991) on learning organizations.

There was evidence to suggest that the participants' development as a team player was enhanced through coaching. Though varied meanings of coaching were espoused by the participants, it was generally felt that coaching provided direction and guidance and a way of relating the underlying values and beliefs of the company. Moreover, due to the organization emphasizing team work and stressing employee empowerment, the role of the supervisor or manager became one of a coach or facilitator which removes barriers to employees. Management did not seem to dictate and control the actions of employees when trying to empower them to make their own decisions and go with their own thoughts and ideas.

Within an organizational context, a shared vision or goal within a team and within the company was considered by all participants to be important in their understanding and learning informally to be team players. Dow has a clear commitment to team work and to the concept of a team player. Through communication, informal and formal, the overall objectives, expectations, values and beliefs of the company are put forth as guideposts. This has been key to their shared understanding of the vision, which helped the participants set their own goals and evaluate their own efforts. Senge (1991) comments on the importance of creating a shared vision within an organization. He refers to a shared vision as "pictures of the future" which "binds people together around a common identity" and "causes people to do things because they want to, not because they have to" (p. 40). Senge believes a shared vision is a necessary component in creating a learning organization.

Putting It All Together

Themes were used to classify the data into meaningful units. But these themes, though presented in this fashion, are not independent of each other. Learning is a dynamic process, thus, the themes--learning from experience, individual characteristics that enhance learning and the organization context--are interrelated, play different roles and vary in impact in how the participants learned informally to be team players. Within this section, the researcher attempts "to put it all together" in order to highlight some of these inter-relationships.

On reflecting back over the data and the interviews, one is left with an impression that these participants felt self empowered at work. Within their jobs they had autonomy and freedom to think for themselves, trust their own decisions, and follow through with those decisions. This environment facilitated characteristics which were considered within this study to be proactive. Marsick and Watkins (1990) states that empowerment is a precondition for proactivity, but within this study the researcher believes that being proactive provides the impetus to search or create an environment which allows for self empowerment. It appears from the findings of this study, that autonomy and a sense of personal empowerment are, if not preconditions, facilitators of informal learning. Regardless, self empowerment and autonomy were dictated by the context in which it resided.

The participants of this study were influenced, as team players, by their working environment. The context provided opportunities for autonomy and empowerment, that is, to make and act on their own choices. This context or environment promoted trust, openness and dialogue, allowing for experimentation and the legitimate use of creativity and intuition. Furthermore, the company's strong sense of direction and commitment to team work provided guidelines for their development as team players. It contributed to their sense of direction, purpose, and meaning as to what is meant by "team player". They suggested that this environment permitted them to take control of their own learning and to evaluate what was right for them.

Within their jobs, it appeared that the supervisors and managers were trying to give up control and dominance in order to take on the role of coaches or teachers. Their function was to serve as creators of development opportunities and learning climates to ensure continuous learning and growth. Given this working environment, participants adopted informal strategies that suited their own learning styles.

Some participants explained that in previous jobs direct manager or supervisor intervention and control into day to day operations restricted their learning. They viewed the manager or supervisor as an authoritarian, who exerted unilateral control over the department which generated internal tension, competition and conflict, poor communication and the lack of identification with the organization.

Within the working environment the participants underwent experiences that shaped and changed their perception, not only as a team player but of themselves. But these experiences were not limited to the workplace. Other spheres of their lives, which included but were not limited to family, friends and community, contributed to their learning to be team players. How these experiences influenced their learning differed among the participants. Some participants suggested that their past experiences, such as team sports, reinforced and built on their previous learning and understanding of being a team player. In this case, the context played a significant part in this process. Learning was directed at skill development or an increased awareness and understanding of their capabilities as a team player. It was suggested by the participants that reflection was utilized to examine various aspects of this learning. However, other participants commented that certain past experiences have forced them to reevaluate and reassess past learning and perception as a team player. Learning was triggered by events within and outside of work which made them reevaluate personal assumptions, beliefs and values. Although the context of the events was important in making the event significant to the participants, reflection appeared to play a more predominate role in the learning outcome. The participants took a more critical view of identifying and challenging the validity of their assumptions and beliefs upon from which they operated. This expanded awareness in their perspectives of themselves and the environment in which they worked led to new ways of thinking and alternative courses of action. In one case, a participant attributed his understanding and success as a team player to such a process. But all learning experiences appeared to be shaped and molded in some way by the participants' daily work environment.

In summary, the themes, learning from experience, individual characteristics that enhance learning, and the organization context, are not independent of each other but make up a complex inter-relationship which resulted in how the participants learned informally to be team players. In the researcher's opinion, the participants on the whole were self empowered, proactive individuals which took informal learning seriously in their development as a team player. This empowerment and development as team players was facilitated by the context in which they worked. Dow Chemical exhibited elements of a learning organization described by Senge (1990) and Pedler et al. (1991). These findings were based on research that only provided a glimpse into the lives of the participants and how they learn informally to be team players. They are not to be considered as fact but as interpretations by the researcher of the data accumulated on six individuals within one organization.

Working Hypotheses

From these findings the following working hypotheses were derived:

1. Informal learning plays an important and vital role in how an employee learns to be a team player.

2. Experiences within and outside the workplace contribute to learning to become a team player. Furthermore, critical life events have a significant influence on the ability of an employee to become a team player.

3. A democratic workplace based on employee empowerment and continuous learning facilitates informal learning.

4. The ability to reflect on one's action, beliefs, values and assumptions defines the amount of learning one derives from life experiences.

Implications of the Study

As the result of this study, and in light of the findings, certain implications should be considered. The following sections highlight some of these implications for practice and for future research.

Implications for Practice

The implications presented below were extracted from the data and from impressions the researcher gained from that data:

1. Informal learning was found to be significant in how an employee learns to be a team player. However, it appears that the company attaches more emphasis and credibility to formal learning strategies than informal learning strategies. The lack of emphasis of informal learning strategies can act as a disincentive to become more conscious of individual informal learning processes, the use of creativity in decision making and to the validation of intuition. There is a need for companies to recognize and validate informal learning strategies by including informal strategies in the repertoire of organizational learning opportunities.

2. Reflection was a integral part in the process of informal learning. Participants, through examination and questioning of information, values, beliefs and experiences, were challenged to reconsider their beliefs and their modes of operation. Adult educators within the workplace should understand and learn how to skilfully facilitate and develop this process. This will assist employees to approach learning opportunities, both formal and informal, in a more conscious and reflective way. In order to accomplish this, however, these facilitators must critically reflect on their own work, values and

relationships.

3. Managers, supervisors and co-workers should be made personally aware of the power and effectiveness of informal learning strategies and experience the benefits of integrating these strategies into their practice. By doing so, they themselves may become facilitators in creating a dynamic learning environment and enabling other learners to use job experiences more effectively, thus extending the community of learners.

4. There is a need to identify and develop coaching skills for supervisors and managers. The value of coaching appears to be significant. Also, efforts could be made to instruct employees to teach and support one another in order to develop informal coaching skills as part of the informal learning process.

5. Adult learning programs should not only reflect workplace issues and challenges. Employees would benefit from the opportunity to identify and explore experiences within the personal, social, and work life of the learner. Helping employees to analyze both successful and distressful experiences might provide a means to discover meaning and understanding and identifying hidden assumptions.

6. To facilitate workplace learning, adult educators in designing workshops, should include opportunities to empower the learner. It was evident within this study, that learning was deemed to be more significant when the participants felt they had control over the process. Learner empowerment could be enhanced by a number of factors: creating a climate of respect, trust and openness; encouraging learners to influence the environment and control the direction of the learning activity; encouraging reflection, action, and reflection; and fostering learning that encourages the examination and questioning of values, beliefs and attitudes. Action learning is one formal learning strategy which would facilitate this process. This method is based on learning by doing and stresses the self-direction of the participants by solving actual work projects.

7. Supervisors and managers need to give their employees autonomy and freedom to undertake self-initiated activities. Offering advice, feedback and assistance with the exploration and resolution of problems will, however, support their learning efforts and, ultimately, allow them to better direct their jobs. When engaged in discussion, supervisors should clarify their meaning so that the discussions encourage shared meaning and enhanced communication.

8. Adult educators need to provide employees with "networking" skills to

promote more effective informal learning. Within the company, resides a vast resource of information and assistance which could form a bases of a collaborative mode of learning where employees would feel free to become involved and share their ideas and feelings. However, only those employees currently, who have the skills and resources to build those networks, can benefit from them.

9. The employee's experience needs to be considered when designing training programs. Participants suggested that the closer the education related to their current and past experiences, the better the learning was. However, it appears that the use of learner experience varied between programs of a skill-oriented nature compared to a more reflective learning situation. Thus, by determining the role of learner experience within a training program will aid in the effectiveness of that program.

10. There is a potential for adult educators to play an integral role in developing a learning organization. Learning should not be limited to a classroom, but encouraged throughout all aspects of the organization. This might include identifying individuals with special expertise and making them available for peer learning. Promoting employees to transmit their job knowledge to, as well as to learn from co-workers would contribute to the design of a culture of continuous learning in the workplace.

Implications for Further Research

Implications for further research are identified in the following for future study:

1. In this study, emotions and learning triggers were intertwined. Although current research suggests that emotions are sources of energy and information crucial in critical reflection, learning and change (Taylor et al., 1991, p. 427), there is not enough evidence within this study to draw conclusions about how emotions help or hinder informal learning. Further research is required to explore this relationship.

2. Within this study, significant incidental learning resulted from unexpected and unrelated events outside the work environment which influenced the participants as team players. But it remains unclear as to what degree and extent these events impact informal learning within the workplace. To assist in the understanding of how other spheres of an employee's life impact informal learning within the workplace, and moreover, as a team player, future study should incorporate life history as a research methodology.

3. There was evidence within the study to suggest that attributes that are typically associated with women are those that are associated with being an

effective team player. According to the data, women seek and give support, confirmation and consensus, look for meaning and interpretation, and provide details of their thoughts and emotions. However, too little data was available within this study to draw any conclusions about these references.

4. The findings of this study were derived from participants who reside in a company under transition, moving from a traditional management structure to one of team work. This study could be replicated to explore consistency of findings across other environments and settings, such as companies which were initially developed and structured around the concept of team work.

5. This study would suggest that there is a relationship between the role of empowerment and proactivity and a combined effect on informal learning in a corporate environment. However, this study only tentatively examined this interrelationship and many questions remain. Further research to examine and explore these relationships is required.

6. The findings within the study would suggest that formal learning and education within the workplace impacted and influenced the participants informal learning process. Since this study did not incorporate the effects of formal strategies in learning to be team players, further research is in order to help understand and develop formal learning strategies which would assist an

employee to learn to be a team player.

7. Further research could be undertaken that would identify how individual differences such as gender, age, social class, and level of education influence informal learning.

8. This study explored ways in which the participants informally learned to be team players and, therefore, contributes to our understanding of informal learning in the workplace. Even so, continued research is needed if employers, human resource developers, and adult educators are to understand and facilitate this process.

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Consent Form

Appendix 1

To Whom It May Concern:

I agree to participate in this study which I understand to be part of a thesis to be submitted is partial fulfillment of the requirements for a Masters in Education in the Universtiy of Alberta, Edmonton, Alberta.

I am aware that:

1. The interviews will be tape recorded.

2. Direct quotations may be used from the interviews but that I will not be identified by name in the final product.

3. All identifying information will be disguised or withheld both in writing of the thesis and in discussion with the investigator's faculty advisors.

4. Except for the thesis, no other information will be shared with my employer.

5. The tapes will be destroyed when the thesis is completed.

6. During the analysis stage in the study, the investigator may seek assistance by an outside reviewer in analysis and interpretation of the study.

7. If I have an additional questions I will contact the investigator or his faculty advisor whose name and phone number have been provided to me.

8. My participation is voluntary and I may discontinue participation at any time.

Signed:

Dated:

Investigator: Fred MacMahon
14509 101 Ave., Edmonton
Home Phone #: 452-4690
Office Phone #: 492-5641

Faculty Advisor: Dr. D. Collett
Office Phone: 492-5621

Participant Profile Inventory

Appendix 2

Code Name:_____

Demographic

1. Gender

   a) Female
   b) Male

2. Age

   a) 25 or under
   b) 26-32
   c) 33-39
   d) 40-46
   e) 47-53
   f) 54-60
   g) 61-65

Job History

4. Current job title:____

5. Number of years in present positions:____

6. Job title prior to current postion:______________________________

7. Years with organization:____

8. What do you consider to be your three primary job responsibilities?

   ____

   ____

   ____

Team Participation

9. Percentage of time spent in team related work:____%

10. Number of years involved in team work:____

Critical Incident

Appendix 3

Employers provide their workers with a variety of educational programs in many different subject areas. Important learning also takes place outside of formal classes. You learn about your job and you learn about your organization and how to work within it. You also learn some important things about yourself throughout your worklife.

Directions: Recall a significant event that occurred at work where you learned something important about yourself, your job, or your organization which facilitated you to be a team player. On this sheet of paper, please describe that incident in detail, including who was involved, what happened, how you felt, and what you learned about yourself, the job, or the organization. When we get together for the interview, we will have an opportunity to discuss your responses. Please spend no more than 20 - 30 minutes preparing this outline.

Interview Guide

Appendix 4

1. Could you tell me about a project or major task that you recently work on.

    a) Would you describe the project or task?

    b) How did you go about learning what you needed to know?

    c) Did you go to anyone else for help?

    d) Where there any barriers that you encountered?

2. In any organization, it is important to know how things get done. If you were training a new staff member, how would you help them learn?

    a) How things get done here?

    b) How did you find that out?

3. I'd like you to think back when you started working in a team.

    a. How did you learn to be a team player? Would you tell me about that experience? (Who, When, Where)

    b. How did you learn what was expected of you? Would you tell me about the experience: (Who, When, Where)

4. What are the benefits for you in being in a team?

    a. What seems to make that happen?

    b. What seems to keep that from happening?

    c. What would make it happen more often?

5. What are the most frustrating parts of being in team?

    a. What seems to make that happen?

b. What could happen that would change that?

6. Overall, what do you think is the most important things to know to be an effective team player?

   a. How have you gone about learning about that?

   b. What keeps you from learning what you need to know?

   c. What helps you to learn what you need to know?

7. What have you learned about yourself, as a team player that helped you to be sucessful?

   a. How do you think you learned that?

8. Describe for me an ideal teamplayer.

   a. How could you make that happen?

   b. What else would be necessary for that to happen?

9. Do you think this company is open? Can you give me an example?

10. What kinds of things are rewarded in this company?

    eg. Individual work or group work -> reward structure

11. Are you a risk-taker?